

OUTLINES OF
GENERAL PSYCHOPATHOLOGY

OUTLINES OF GENERAL PSYCHOPATHOLOGY

By *WILLIAM MALAMUD, M.D.*

*Professor of Psychiatry, State University of Iowa
Assistant Director, Iowa State Psychopathic Hospital*



CHAPMAN & HALL, LTD.
11, HENRIETTA STREET, COVENT GARDEN,
LONDON, W. C. 2

Printed in the United States of America

TO

I. T. M.

CONTENTS

PREFACE

xiii

PART I. INTRODUCTION

I. THE FIELD OF PSYCHOPATHOLOGY 3

Subject matter.

Definition.

Relationships and limitations.

The history of psychopathology.

II. PRACTICAL EVALUATION 25

The value of psychopathology in its own field.

*Its application in the fields of (1) medicine,
(2) psychology, (3) mental hygiene, (4) child
welfare, (5) education, (6) sociology, (7) the
fine arts, (8) religion.*

III. THE SOURCES AND ARRANGEMENT OF THE MATERIAL 33

*Sources of material: observation, experiences,
history.*

*Arrangement: phenomenology, determinants and
relationships, synthesis.*

PART II. PSYCHOPATHOLOGICAL ANALYSIS: PHENOMENOLOGY

Section I. Behavior

IV. THE PSYCHOPATHOLOGY OF BEHAV- IOR IN GENERAL 51

*General remarks concerning phenomenology.
Concerning psychopathological behavior.*

Disturbances in general behavior.
Direction: outward, inward.
Quantity: exaggeration, diminution.
Quality: form, content, contact, intensity, efficiency.

V. THE PSYCHOPATHOLOGY OF RECEPTION 75

Receptivity: accentuated, diminished.
Attention: tenacity, vigilance, scope, direction.
Sensation: quantitative, qualitative disturbances.
Space and time.

VI. INTELECTION (A) 84

Consciousness: cause and effect, orientation, thought.
Associations: quantitative, qualitative disturbances.
Symbolic appreciation.

VII. INTELECTION (B) 105

Judgment.
Comprehension.
Memory: quantitative, qualitative disturbances.
Intelligence.
Decision.

VIII. DISTURBANCES IN EXPRESSION 120

Motility: general movements, movements of special organs.
Speech: phonation, articulation, rhythm, symbolic expression.
Communication.

IX. DISTURBANCES IN OTHER FORMS OF ORGANIZED MOTOR EXPRESSION 134

Gesture: quantitative, qualitative.
Coördination.
Gait.
Posture, station.
Writing.

Artistic expression: painting and drawing, music, decoration, dancing.

Emotional expression.

X. INSTINCTUAL EXPRESSIONS 150

Disturbances in activities expressive of the nutritive instinct: procurance of food, appetite, ingestion, gastrointestinal functions, evacuation, assimilation.

Sexual: disturbances in degree of activities; qualitative changes.

XI. DISTURBANCES MANIFESTED IN COMPLEX ACTS 162

Compulsive acts.

Automatic acts.

Primitive acts.

XII. PSYCHOPATHOLOGICAL DISTURBANCES OF SLEEP 174

Rhythm.

Quantity.

Transition between waking and sleep.

Content.

Form.

Section II. Experience

XIII. DISTURBANCES IN THE GENERAL ATTITUDES 183

Concerning experience.

Attitude to the situation: acceptance, dissatisfaction, indifference and inadequacy.

Attitude to the environment: acceptance, dissatisfaction.

Attitude to oneself: over-satisfaction, self-depreciation.

XIV. DISTURBANCES IN THE SUBJECTIVE COMPONENTS OF RECEPTION 196

The sense of reality: increase, decrease, depersonalization.

Feelings: intensity, quality.
Perception: intensity, quality.

XV. DISTURBANCES IN THE FUNCTIONS
OF SUBJECTIVE EVALUATION (A) 215

Concerning subjective evaluation.
Disturbances with preservation of subject-object
differentiation: in relation to external con-
tents, internal contents.

XVI. DISTURBANCES IN EVALUATION (B)
TRANSITIONAL 224

Exaggeration of subject-object differentiation,
objectification of subjective contents, decrease
in differentiation.

XVII. DISTURBANCES IN EVALUATION (C)
WITH THE LOSS OF SUBJECT-
OBJECT DIFFERENTIATION 240

In relation to the outside world; internal con-
tents.

XVIII. PHYSIOLOGICAL CONCOMITANTS 247

Respiration.
Cardiovascular system.
Changes in color of skin.
Glands of secretion.
Electrophysiological changes: action currents,
intensity, chronaxy, psychogalvanic reflex.
Pharmacodynamics.

PART III. DETERMINANTS, PATHOGENESIS, AND
RELATIONSHIPS

XIX. PHYLOGENETIC DETERMINANTS 257

Concerning the causation and manner of de-
velopment of psychopathological phenomena.
Constitution, heredity.
Types: constitutional, mental, physical.
Special constitutional characteristics.

XX.	ONTOGENETIC DETERMINANTS	280
	<i>The psychoanalytic theory.</i>	
	<i>Individual Psychology.</i>	
	<i>The theory of the conditioned reflexes.</i>	
XXI.	RELATIONSHIPS WITHIN THE SITUATION	313
	<i>Social factors.</i>	
	<i>Economic factors.</i>	
	<i>Personal factors.</i>	
	<i>Cosmic influences.</i>	
XXII.	ORGANIC DETERMINANTS	323
	<i>The specific effects of organic causes.</i>	
	<i>Local manifestations of organic disturbances.</i>	
XXIII.	PERSONALITY STRUCTURE (A)	337
	<i>Earlier concepts.</i>	
	<i>The psychoanalytic system: conscious, unconscious, preconscious.</i>	
	<i>Impulse, temperament and character.</i>	
XXIV.	PERSONALITY STRUCTURE (B)	349
	<i>Self-assertion: self-preservation, self-extension.</i>	
	<i>Accretion: growth, propagation.</i>	
	<i>Ratiocination.</i>	
PART IV.	PSYCHOPATHOLOGICAL SYNTHESIS: REACTION TYPES	
XXV.	SYSTEMS OF CLASSIFICATION	367
	<i>Concerning synthesis in psychopathology.</i>	
	<i>Psychiatric clinical classification.</i>	
XXVI.	SYNTHESIS ON THE BASIS OF PERSONALITY STRUCTURE	378
	<i>The disadvantages introduced by certain methods of classification.</i>	

The difficulties encountered in categorizing human behavior.

"Fundamental disturbance."

Synthesis on the basis of personality structure.

XXVII.	PSYCHOPATHOLOGICAL REACTIONS WITH A DISTURBANCE IN THE FUNCTIONS OF RATIOCINATION	388
XXVIII.	PSYCHOPATHOLOGICAL REACTION TYPES WITH DISTURBANCES IN THE FUNCTIONS OF ACCRETION	400
XXIX.	REACTION TYPES CHARACTERIZED BY DISTURBANCES IN THE FUNC- TIONS OF SELF-ASSERTION	415
XXX.	COMPLEX AND TRANSITIONAL RE- ACTION TYPES	427
	<i>The relationship between etiology and funda- mental disturbance.</i>	
	<i>Complex reaction types.</i>	
	<i>Transitional types.</i>	
	GLOSSARY	441
	BIBLIOGRAPHY	449
	INDEX	455

P R E F A C E

THE RAPID progress that has been made within the last three decades in the study of abnormal mental processes and the resulting increase in the complexity and scope of this field, have made the presentation and grasp of psychopathology exceedingly difficult. The inroads made by workers in other fields bringing with them a variety of attitudes and points of view, added to the numerous theories and observations contributed from within, have tended to obscure the fundamental issues to the point where it is difficult to recognize objectively valid facts from hypothetical assumptions. For these reasons I have attempted to treat the subject primarily from the point of view of objective observation of the reacting organism. Theories advanced to explain these reactions are helpful in elucidating causal relationships, but they must be made to fit the facts rather than force the latter into preconceived grooves.

The purpose of an outline of this type is to present the general features of the subject. It lays no claim to an exhaustive discussion of the various ramifications and specialized investigations in the field of psychopathology. To those who are interested in these problems and wish to gain further information, the references and bibliography will serve as leads along those lines. The literature that has accumulated on this and allied subjects is so large that no attempt has been made to cover it completely. Publications dealing with the various phases of the subject were drawn on freely, but direct references were made only where further reading was deemed advisable. The whole bibliography is appended at the close of the book, arranged in the alphabetical order of the names of the contributors. These are numbered consecutively, and the numbers are

used in the book wherever references are made to the particular contributions in question.

As particular guides through the intricate paths of this subject, the author wishes to acknowledge his indebtedness to the influence of Karl Jaspers, Paul Schilder, Victor von Weizsäcker, and William Stern in the broad aspects of psychopathology and psychology, and to Eugen Bleuler, Adolf Meyer, and C. Macfie Campbell in psychiatry. For the generous advice in arranging the course which served as the starting point for this book, in the preparation of the MS., and in the critical examination of it, the author is especially grateful to Dr. Andrew H. Woods, Dean C. E. Seashore, and Dr. E. Lindemann, all of the University of Iowa.

Some of the case material used as examples of certain reactions has been published previously by the author. Permission to utilize this material in the present work was kindly granted by the editorial staff of the following journals: *The Archives of Neurology and Psychiatry*, the *Journal of Nervous Diseases*, the *American Journal of Psychiatry*, and the *Iowa State Medical Society Journal*. Acknowledgment is also made herewith to the publisher and author of E. Kretschmer's *Medizinische Psychologie*, Georg Thieme Verlag, Leipzig, for permission to quote one of the cases described in that book.

Also the author wishes to thank his publisher for valuable advice in the final preparation of the material and helpful suggestions in the technical arrangement.

WILLIAM MALAMUD

PART I

INTRODUCTION

Chapter I

THE FIELD OF PSYCHOPATHOLOGY

Subject Matter

TO THE average person, not acquainted with the present-day concepts of psychopathology and not specially trained in the fields of psychology or psychiatry, mental disease usually implies a form of behavior which is primarily characterized by its bizarreness and unintelligibility. Most frequently it brings a picture of a raving excited person in a straitjacket or padded cell, going through a series of incomprehensible movements, hearing imaginary voices, seeing visions and, in general, acting in a way which has popularly come to be designated as "crazy." Such behavior is considered not only as queer and out of the ordinary, but as incomprehensible in terms of laws of causality and devoid of meaning and relationship to the personality as a whole. Unfortunately this attitude towards mental disease is not entirely limited to the lay public, but is occasionally expressed by some psychologists as well as by some psychiatrists. In their opinion, most of the symptoms of mental disease are unintelligible, not only because of our lack of proper methods of approach, but because they are inherently different from normal mental activity and can never be understood in the same way as normal behavior. They feel, therefore, that psychopathology cannot possibly go beyond classification and description to an actual understanding of the fundamental principles involved.

It is obvious that with an attitude of this type psychopathology could never be established as an independent science, because a science must necessarily include more than just classification and description. It must have, in addition to

these, an insight into the nature and mechanisms of the facts so described and classified. The first step in approaching psychopathology, therefore, should be to ascertain whether such insight is possible. In observing the phenomena of abnormal mental activity we will ask first of all: are they really inherently unintelligible or do they have some meaning to the patient even though not to the observer? Furthermore, should we regard them as originating without any reference to what has happened before, or can they be shown to be subject to the natural laws of causality? Finally, are they fundamentally different from the phenomena of normal behavior, or can we find some relationship between the two in terms of general laws underlying mental activity?

It is true that even with all the added knowledge and newer methods of approach that we now have, there are still phases of abnormal mental behavior that are not clear to us. The fact remains, however, that these are becoming progressively diminished in number. In the practical work with mentally diseased persons we find numerous instances where psychopathological phenomena, meaningless and irrelevant in themselves, can be shown to be definitely related to some experience in the patient's previous life and of a distinct meaning to him, provided we care to undertake a detailed study of the personality involved. Intensive studies of cases of this type and the insight they have given us into the mechanisms of the particular psychopathological pictures presented by them, enable us to take a definite attitude towards the whole field. That is, we appreciate that if previously unintelligible phenomena can be understood on the basis of such studies, we are justified in assuming that it is only a matter of time and further study, until most manifestations of psychopathological behavior will be made clear. In fact, at the present time, there are so few symptoms of abnormal human behavior that are altogether unintelligible, that even now we can outline, in broad terms, certain general principles applicable to most of such phenomena. As the problem involved in this consideration is of such vast importance in the study of psychopathology, it is imperative that the student should be acquainted with the possibilities in

this direction at the outset, and there is no better way of accomplishing this than through the presentation of an illustrative case.⁶⁸

A woman, forty-six years old, married and the mother of two grown children, was brought to the clinic with the complaint that for about six months she has been tormented with fear that she will murder her husband and the grandchild that has been living with them for the past five years. She has worried continually about these thoughts, mostly because they seemed so queer and unreasonable to her, and yet she could not rid herself of them. In the preliminary interview, she stated that these fears commenced suddenly, one day as she was listening to a radio program of popular songs. At this time she emphasized the fact that she loved her husband and the child, that she knew of no reason why she should wish to hurt them, and that previous to the onset of her trouble she had never had symptoms of this type. Physically she was in good condition, and the economic status of the family was satisfactory.

We find here the sudden development of a distressing and superficially unintelligible symptom of mental disease. To all appearances, this symptom has no relation to the particular personality, to the situation in which this person found herself, or to the persons against whom her tendencies were expressed. We also fail to see any causal relationship of this phenomenon to occurrences preceding it, either in the immediate or remote past. For the purpose of gaining insight into the mechanisms of this phenomenon as well as in an attempt to help the patient, a detailed analysis was undertaken which yielded the following significant points: (These facts were elicited mostly through free association especially in relation to the dreams of the patient. Some of them, the patient subsequently admitted, were clearly in her mind during the first interview, but she did not talk about them because she did not think that they had any bearing on her disease and also because she was ashamed of them. A great many of these facts were actually forgotten, however, and came out only during the analysis).

Very little information could be obtained concerning the patient's family history, as the parents were immigrants. The father was a

meek, weak-willed type of individual, in contrast to the mother who was the dominating personality of the household. She was strict with the children and with the husband as well. The patient, who was more like the mother, liked the father because he was kind, but was also disgusted with his meekness and lack of initiative. She grew up in close association with her older brother, who was very much like the mother, and whom the patient both feared and respected. Early in life the patient became conscious of a strong sexual drive and obtained a great deal of satisfaction from sexually colored play with the older brother. These were kept secret from the mother and from her earliest days the patient's attitude towards sex was characterized by the feeling that gratification of this instinct, even if desirable, was not permissible and that she would be safest with men who were more like her father than like the brother. This was strengthened by the fact that the discovery by her mother of these sexual plays with the brother resulted in severe punishment for both and a cessation of the experiences. At the age of thirteen she had to go to work for a family in the neighborhood as the economic conditions in her home were rather poor. The man she worked for was of a coarse and unscrupulous type and he forced the patient into sex relations with him, which finally resulted in pregnancy and an abortion. In addition to this unfortunate experience the patient was severely punished by her mother who impressed the patient with the fact that she had ruined her chances for a proper sexual adjustment in the future. In her subsequent places of employment the patient was subjected to further sexual experiences, which, although they were a constant source of fear, were, nevertheless, enjoyed by her. At the age of eighteen, one of these experiences again resulted in pregnancy and abortion. This abortion was performed by a physician, who stipulated that in return for his services the patient was to permit him to have sexual intercourse with her. It was at this time that she met her present husband. He was ten years older than she and of a type very much like her father, meek, with little initiative, and not aggressive sexually. From the very first she liked him because he was so "nice and gentlemanly," although she was not sexually attracted to him. He was economically rather successful and the patient's mother manoeuvred an early marriage although in addition to his lack of attractiveness he was not of the same religious faith as the patient and she had to renounce her Catholic affiliations in marrying him. A further source of worry was the constant fear she had that he might find out about her sexual

experiences, which weighed on her mind particularly strongly since she had not even dared to talk about them in her confessions to her priest.

The patient realized from the beginning that the husband was not a satisfactory sexual mate. He considered that part of their marriage as a matter of duty, and was much more interested in his farm than in her, but she was grateful to him for the nice home he gave her and decided to put all these other desires out of her mind. She could not, however, reconcile herself to his meek and unenterprising nature and the fact that in his dealings with other men he was always timid and yielding in contrast, especially, to her older brother. Two children were born, a boy and girl. She worried about the daughter, who was very much like herself, and feared, especially, that she might have the same unfortunate sexual life. About five years after her marriage the husband's brother-in-law came to work on their farm as a hired man. He remained with them only a short while but made a very definite impression upon the patient, her attitude towards him being a mixture of fear and fascination. He was physically strong, courageous to the point of recklessness, coarse and vulgar. He was very quick-tempered and was said to have killed a man in a fit of anger. The patient admired him for the possession of those qualities which she missed in her husband, but was in constant fear of him "lest he might attack" her and she could not "even depend upon the husband" for protection. He was of a jovial disposition, laughed a great deal, and liked to sing vulgar parodies of popular songs. (At this point in the analysis it suddenly occurred to the patient that the tune she was listening to at the time of the sudden onset of her fears was a particular favorite with this man and one that she "particularly detested" because of the sexually vulgar words the man had set to the tune.)

Shortly after the man's arrival the patient began to ask the husband to dismiss him, although she never told him exactly of what she was afraid. After about a year the husband finally got up enough courage to get rid of the man and he left them permanently. Within the next few years and as the patient's daughter began to grow up and exhibit definite interests along sexual lines, the patient became increasingly more worried about her and kept constant watch over her. When the daughter was about eighteen, a middle-aged widower who had a reputation of being sexually promiscuous moved into the neighborhood. The patient began to worry a great deal, for fear this man might seduce her daughter or attack herself. She explains

the reason of the intensity of these fears on the basis of the fact that by this time her husband had begun to show signs of aging and an exaggeration of his former undesirable traits. He became less active even than before, both in his daily life and in his sexual interests. For the last ten years their sexual relations were very infrequent and recently he had given them up completely. Her fears, at least in relation to the daughter, proved to be justified for she found that the daughter was having intimate relations with the widower and these resulted in pregnancy. As the daughter was at the same time engaged to another, younger man, she was made to marry him and the illegitimate pregnancy resulted in the birth of a boy shortly after this marriage. Neither the daughter nor her husband was particularly fond of this child. They abused and neglected it, and finally the patient decided to take him into her own house and has kept him since then. She has always looked upon this boy as the living evidence of both her own and her daughter's immoral behavior, so that although she tried to compensate by being particularly kind to him, she nevertheless was constantly reminded by him of those experiences which were at once pleasant and sinful. As time went on, a series of circumstances tended to intensify the unpleasantness of the situation. Her own son had by this time proved worthless and had become involved in various difficulties. The grandchild was a sickly boy and had contracted illness after illness. The husband was growing less satisfactory from every point of view, but especially sexually, and to add to this, two years before her admission to the hospital, she began to develop the first signs of the cessation of menstruation. These took the form of irregularities in the menstrual period, "hot and cold flashes," irritability, and, as is frequently the case, an exaggeration of desire for sexual contacts. This made her feel still more keenly, on the one hand, the earlier experiences of which the boy was a constant reminder, and, on the other, the dissatisfaction with the husband. She tried to make herself put these thoughts out of her mind and overcompensated by being particularly nice to both, but in her dreams she saw herself losing them either through accidents or by the husband deserting her and taking the child with him. In her waking moments she found a morbid interest in news items referring to women killing their husbands or children.

It was shortly before the onset of her illness that two incidents occurred which, as the patient herself realized during the analysis, led up directly to her peculiar fears. The first of these was that

a woman in the neighborhood developed a psychosis and in her excitement killed her two children. The second was more complicated and more directly related to her earlier life. The daughter of the brother-in-law, who had been of so much sexual interest to the patient shortly after her marriage, came to live on an adjoining farm. She was married to a weak-willed and simple-minded type of a man, while she herself was very much like her own father. As a result there was a great deal of quarrelling and fighting, and the husband, who usually came out second best, would take refuge in the patient's house. From the very beginning the patient came to hate this woman and at the same time began to think how dreadful it would be if she, the patient, would act in the same way towards her husband. On the morning of the day when her symptoms began, this woman, in a fit of anger against her husband, picked up the bread knife and threatened to slash his throat. The man ran to the patient's house and told her of this attack. She commiserated with him, but was herself very much upset by the incident, and when the man left her she put on the radio to get some distraction. It was then while the familiar tune was played that she suddenly felt weak and dazed and the fear came upon her that she might become insane, and lose control of her actions. The doctor who was called in found no signs of physical disease, told her that it was all her imagination and that if she did not "pull herself out of this" she might really become insane. It was shortly after that, and while her symptoms showed no signs of leaving her, that she gradually began to develop the fears of killing her husband and grandchild.

There were other significant points that came out during the analysis, but those reported here are sufficient to indicate the trend of the occurrences. At present it is best to refrain from any theoretical consideration of the nature of the mechanisms involved, or the reasons why this form of analysis finally resulted in the removal of the symptoms. The point of importance is that, what appeared at the first interview as totally unintelligible, found an explanation in the subsequent study of the patient's background. Even the brief presentation of the study as related above shows clearly that the psychopathological phenomena which the patient showed upon admission, instead of being absurd, accidental thoughts, meaningless to her and unrelated to the rest of her personality, can now be seen as

directly connected with a series of occurrences throughout her life and as manifestations of her adjustment to a difficult situation. Observations of this type, carefully collected and examined critically, make it possible to establish psychopathology as a science, which is concerned not only in the description and cataloguing of the material but also in the understanding of it. With this in mind we can proceed with the investigation of this subject.

Definition

One of the most difficult tasks in the presentation of any subject is its definition. The very meaning of definition carries with it the implication of restriction and at the same time a complete inclusion of all the important components of the field. It is because of this, perhaps, that so few writers on psychopathology care to commit themselves to an unqualified definition. With a field as broad as it commands, merging almost imperceptibly into a rich variety of other subjects, any attempt at definition may carry with it a severance from concepts that are vitally related to it. One cannot, however, conceive of a subject that lays claim to any degree of scientific exactness which cannot be defined. It is evident, therefore, that if we are to solve this dilemma successfully, we will have to compromise in such a manner that both of these requisites, conciseness and all-inclusiveness, will be reconciled. This can best be accomplished by offering a definition which will present the fundamental principles of the subject as concisely and yet as fully as possible, and then qualify it by a discussion of the different components of this definition in which the broader relationships of the subject can be dealt with.

Psychopathology may be defined as *a science that deals with the recognition, description, classification, and understanding of phenomena of abnormal mental activity.*

As it stands, this definition includes a number of components, some of which need further explanation and others whose justification may not be quite apparent. The definition will,

therefore, have to be qualified by the following discussion of each one of these components.

(1) Can psychopathology justifiably be called a science? The nature of the phenomena with which it deals, as well as some of the theories that have been advanced to explain their character, causation and manner of development, seem to give rise to serious doubts in the minds of some students as to whether they are not too intangible to be dealt with as scientific material. Whether we are justified in claiming scientific validity for the subject depends quite closely upon what one considers as the necessary criteria of science. Bernard Hart³⁴ in his discussion of this problem takes as a starting point the definition of science as given by Karl Pearson, who regards its method of attack as the essential characteristic of science. This method should include the observation of phenomena, their orderly arrangement and classification and the finding of "laws" which will serve to explain them. Any subject which deals with facts that can be observed, classified and explained is justifiably regarded as a science. These facts are usually physical in nature, but mental phenomena may also be observed in different persons by different observers, and these observations are subject to classification. If, in addition to that, certain mechanisms can be presented as commonly occurring in the development of these phenomena, and are predictable with a high degree of probability as occurring in phenomena of this type in the future, we have a field which can be characterized as a science. In the succeeding chapters dealing with the material that is observed in psychopathology, both in the description of the phenomena themselves and in our understanding of them, it will be shown that such is the case and that, therefore, the first component of the definition is justified.

(2) The definition includes the recognition, description, classification, and understanding of these phenomena, and the question may come up as to whether all of these are really of importance. Some students of psychopathology are of the opinion that it is only the understanding or the explanation

from a psychological point of view that forms the central nucleus of psychopathology as a science. This is not correct. Any branch of scientific endeavor, whatever its nature, must have a series of observed facts upon which the rest of the structure is based. Such facts, in order to be observed as distinct entities, must be recognized as such and differentiated from one another as well as from other facts which are related to them. Furthermore, these facts cannot be dealt with in a slipshod, haphazard fashion but must be arranged in a logical manner under certain concepts and categories; that is to say, these facts must be classified into groups which contain closely allied phenomena. Only with that, as the material available for scientific treatment, are we enabled to approach a systematic understanding of the whole subject. It is also incorrect to take the attitude that in dealing with psychopathology these phenomena must have a psychological explanation. The phenomena are symptoms of mental disease or, in psychopathological language, phenomena of abnormal mental activity. Any mechanisms which help us in understanding why they are developed and what the manner of this development is, should be considered as useful in such an explanation. It is true that in a great many of these phenomena we deal with psychopathological entities best understood on the basis of a psychological approach. Others, however, are much more easily approachable on the basis of a physiological or pathophysiological explanation. It is neither possible nor desirable to enter here into a polemic as to which is physical and which is mental and in what way the two are related. Empirically, it is a well-established fact that pathological psychic states can be produced by physical factors as well as by psychological ones. It is possible to conceive of a field that would concern itself mainly with the attempt at the understanding of none but the psychological steps in the development of abnormal mental activity, and such a field would justifiably be designated as abnormal psychology. In the field of psychopathology, however, we are not restricted to that alone, as we are studying the pathology of psychic states rather than the psychology of abnormal mental activity. From that point of view an ap-

proach from both angles, that is to say the psychological and the physiological, should be employed; so that by the understanding of these phenomena we mean one that includes both of these angles of approach.

(3) What are the facts with which psychopathology deals? They were designated as phenomena of abnormal mental activity, but what does one imply by phenomena of mental activity? To be consistent with our scientific approach we would necessarily mean, by these, phenomena that can be observed. This does not necessarily mean an objective type of observation. Some of these facts undoubtedly lend themselves to objective observation. Others, however, can only be observed indirectly by an outsider through communication by the person in whom these facts occur. With this in mind we may classify these phenomena into three groups. The first would contain all those objectively observable phenomena which are usually grouped under the term *behavior*. They can be defined as the observable reactions of the individual in a given situation. Second, we have a group of phenomena which we could designate as *experiences*. These phenomena cannot be directly observed by the outsider but are experienced by the individual and can be related as such to the observer. Thus, if we are to designate crying as a phenomenon belonging to the field of behavior, we can consider its subjective counterpart, that is, the feeling of sadness, as belonging to the field of experience. This cannot be seen or evaluated by the observer in the same way as its outward manifestation. Nevertheless, we can ascertain its existence on repeated occasions in different individuals in response to more or less similar situations. Third, there is a group of phenomena which can be observed in the functioning human being, and which cannot be regarded as belonging to behavior in its narrower sense, or to experience, but as accompanying either one or both. These may be designated as the *concomitants* of behavior and experience and are represented by such phenomena as changes in pulse rate, respiration, blood pressure, electrical changes, etc. These three groups comprise all of the phenomena which can be designated as representative of mental activity.

There still remains another part of this last component of the definition which needs further elucidation; namely, the characterization of these phenomena as abnormal. It is probably the most difficult of all the components to establish with a clear line of demarcation. What does one mean by mentally normal and mentally abnormal? Are there any criteria that we can use in an absolute differentiation of the one from the other? For a successful differentiation one would need some kind of standard with which these phenomena can be compared and their relative values determined. It is here more than anywhere else in psychopathology that the specific goals of the individual observer introduce such a variation of standards. We have, for instance, the legal definition of abnormal mentality, the social, the medical, the pragmatic, the moral, ethical, esthetic, and numerous others.

It is clear that to establish a differentiation within the field of psychopathology one would have to accept a single standard even though this standard can take other concepts into consideration if circumstances demand it. Such a single standard would have to be established within the field of psychopathology itself and would have to depend upon the concept of this subject. As will be seen later, psychopathology differs quite definitely from psychiatry on the one hand and psychology on the other, just as it differs from any other allied sciences. To designate a phenomenon as belonging in the field of psychopathology, we merely mean that that phenomenon is one that is essentially different from what one would observe in proper reactions to a given situation. But what are proper reactions of an individual to a given situation? By their very definition, they are those that permit a proper *adjustment* of the individual to himself and his environment. This concept of "adjustment," then, must be taken as the nucleus for the establishment of a standard within psychopathology. This means that the differentiation between normal and abnormal in psychopathology will depend primarily upon the degree of success which the reaction achieves in the adjustment of an individual to a given situation. The matter of differentiating between normal and abnormal mental activity would be ren-

dered quite simple if human beings could be classified categorically into two groups, one of which adjusts perfectly and the other not at all. In life, however, this does not hold true. Even with the risk of appearing trite, the statement must be made that no person can be considered as having made an ideal adjustment. Similarly, even in the most serious of mental diseases a certain attempt at adjustment is carried on with a certain, even if small, degree of success. For our definition, therefore, we will have to follow in the footsteps of the Platonic method, in that we will have to establish an ideal, though arbitrary, concept of normal mental activity and an opposite of abnormal. With that as an imaginary basis of comparison, we will have to say that phenomena which approach more nearly the ideal of the normal should be considered as normal, and those which approach the opposite as abnormal.

These ideals could be stated as follows: a person could be regarded as adjusting normally to a given situation at a certain time if the result of this adjustment is perfectly satisfactory to the person and equally satisfactory to his environment. As the opposite of that, that is to say the abnormal, we might designate a form of activity which results in an adjustment completely unsatisfactory to the individual and to his environment. Any phenomenon of mental activity that tends to approach the first is designated as normal, whereas those phenomena which tend to approach the second are designated as abnormal. It must be remembered in using this standard that what we are dealing with are phenomena rather than total reactions. Medically, legally, or sociologically, the total adjustment of the individual is the deciding factor. Persons who show certain queer reactions in their behavior but who pragmatically still succeed in adjusting are considered as normal, and it is because of that, that from these points of view certain phenomena which we could consider as psychopathological could be designated as still within normal limits. They are, however, the rudiments out of which generalized psychopathological states may develop, and as such should be considered as essentially of the same nature as the more serious obstacles to adjustment. In our presentation of phenomena in

the succeeding chapters we will, therefore, deal with these as well as with phenomena that are also in other fields considered as abnormal.

There is one more factor that should be considered in this connection. Single individuals as well as isolated groups of persons differ in their tastes, desires, education, customs, and so on. Given two individuals of opposite types, the same form of reaction leading to similar results will in the one case be satisfactory and in the other unsatisfactory. Certain experiences which to the one individual are very painful may by another individual be experienced as pleasurable. Similarly, various social groups may have different standards as to what is acceptable and what should be rejected or punished. This standard of adjustment, therefore, must take into consideration the particular medium in which the person lives as well as the individual himself and his special form of development. It is evident that this particular component of our introductory definition is the most difficult to deal with satisfactorily. It is one, too, that makes it important for the student of psychopathology to appreciate the wide range of psychopathological concepts and the broad field which one has to cover in order to understand and evaluate their phenomena correctly. The broader the appreciation of this concept, the more successful the student in his dealing with the subject. These considerations show how inadequate a precise definition of psychopathology can be if its ramifications are not clearly visualized. But even if it is difficult, it is not impossible. It implies, however, that the psychopathologist before he evaluates the meaning of a phenomenon and its classification as normal or abnormal, will have to gain as complete an understanding of the situation as is possible.

Relationships and Limitations

From the definition as discussed above, it is evident that psychopathology is very closely related to a number of other scientific fields and that a thorough understanding of psychopathology can only be gained on the basis of the appreciation of how it is related to the others and in what way it differs from

them. At this point we wish to consider this problem in connection with two allied sciences which bear a particularly close relationship to psychopathology, namely, medicine and pure psychology. Inasmuch as it deals with phenomena of a diseased mind it is related to medicine, and inasmuch as it deals with the mind at all it is related to psychology. The relationships of psychopathology to these two sciences as well as its delimitation from them can probably best be appreciated on the basis of an analysis of the goals of these three fields. Medicine, in dealing with psychic phenomena just as in dealing with physical phenomena, has as its main goal the recognition of symptoms indicative of a diseased mind for the purpose of treatment and management. Its goal, therefore, is a purely practical one. The recognition of the phenomena and their differentiation from normal mental life is not an end in itself but is simply an aid in diagnosis, which in itself is only subservient to the final goal of combating disease. The ideal goal that the medical man places for himself is that of prevention and treatment of disease. Diagnosis and prognosis are only aids in the striving for that goal. In this respect medicine can use psychopathology in the same way that it uses other aids in the recognition of symptoms of disease, such as chemistry, physical measurements, etc. In contradistinction to this psychopathology does not place as its aim the treatment of the phenomena with which it deals but the recognition of these phenomena and the analysis of their mechanisms.

Pure psychology can be regarded as the opposite of medicine in that respect. It deals with mental activity as such. In pure psychology there is no question of giving primary importance to normal or abnormal behavior, nor is it important what influence this has in the matter of health. The psychologist is curious to know how and why mental activity is such as it is, without consideration as to its practical application. In this respect psychology is very much like philosophy in that it remains pure only so long as it is not turned toward practical application. As soon as it accepts a practical consideration as its goal it becomes a branch of applied psychology. Thus, for instance, we have the psychology of advertising, industrial

psychology, and numerous others. From this point of view psychopathology can be considered in part as belonging to the field of the applied psychologies. It has a practical angle to it in that it is not interested in psychic activity as such but is interested primarily in that part of mental activity which is abnormal. Psychopathology, therefore, may be said to occupy a place between pure psychology and medicine. In contrast to psychology it is practical; in contrast to medicine it is theoretical. It may be said that psychology bears the same relation to psychopathology as psychopathology does to medicine.

With this in mind we can clearly see the limitations of psychopathology as such. A medical student may study psychopathology in the same way that he studies chemistry, to further his understanding of the symptoms of mental disease and thus be better equipped to treat or prevent it. Psychopathology itself, however, can never replace medicine, nor can the student of pure psychopathology attempt to apply his knowledge of psychopathology in the treatment of disease without any further training. On the other hand, the psychopathologist should not become a crusader in psychology. With a knowledge of psychopathology only, we cannot, and should not want to advance theories and explanations of pure psychological problems. Psychopathology should be limited definitely to the attempt to understand theoretically certain practical psychological questions, that is, phenomena of abnormal mental activity.

It is very important to recognize these relationships and limitations, because in each one of these three subjects we are dealing with sciences which have different values and objectives. Science is as much dependent upon its objectives as upon the facts it gathers, because facts do not exist isolated from any other relationships, and the manner in which we gather these facts will depend primarily upon the goal we have in mind. It is because of this that in studying psychopathology we should not concern ourselves primarily with certain disease entities and their symptoms, because then we would restrict the field of psychopathology to something that would be better designated as the symptomatology of psychiatry. On the other

hand, we should not start out in psychopathology with the idea that we are seeking purely psychological explanations in the relationships of psychopathological phenomena, because then we would only be dealing with a restricted part of psychology.

The History of Psychopathology

The way in which psychopathology was developed until it reached the present stage, the different changes it has undergone and the reasons for these, fascinating as they may be, form too broad a field to be included in the present discussion. Some of the more important phases in the course of this development, as well as the general trends that can be recognized as characteristic of the subject itself, must be appreciated before we can take up a discussion of its present-day status. If we are to adhere consistently to the nature of our definition, we will have to consider as the starting point of this development the first attempts to describe and classify these phenomena as manifestations of abnormal mental activity and to explain them in view of what at that time was considered as an adequate criterion of science. Some may object to this point of view on the basis of the fact that science in general and psychopathology in particular as we regard them today differ materially from the concepts, e.g., of ancient times. This is true, but it is also probable that in the centuries to come our own concepts may be displaced by other still more adequate ones. The important thing is that the fundamental basis of any scientific endeavor remains the same, viz., that of attempting to gain insight into the causes of facts as they are observed. Whatever change may take place in the method, the goal remains the same. As long as this goal remains the same, that is, to observe psychopathological phenomena and try to understand them in the light of current concepts of science, we have the essential features of the development of this subject, no matter what the methods may be. With this in mind we can go back to the days of the ancient Greeks when Hippocrates attempted to describe certain forms of psychopathological phenomena, classify them as belonging to certain syndromes such

as hysteria, and try to explain them on the basis of disturbances of what was then considered as fundamental functions.

Since then and following through until the present time, we find psychopathology developing along different lines, and at an uneven speed. The variations in the speed of progress were conditioned by the occurrence of epoch-making discoveries that lent impetus by way of the new fields they opened up. Its various lines, although frequently interrelated, can be separated into three main divisions: 1) The *practical* in which psychopathological phenomena were studied mainly in association with the knowledge that was thus gained in the treatment of mental disease. 2) The *descriptive* which was mostly concerned with the recognition and classification of the phenomena. 3) The *explanatory* which had as its main objective the understanding of their nature and manner of development. In the following we can give only brief indications of the phases of this development along each one of the above lines.

I. The *practical*. The history of this line of approach is that of Neuro-Psychiatry. The neurologist and the psychiatrist, with their main objective represented in the attempt to combat disease, were quick to realize the help they could get from a proper insight into the character and nature of these phenomena. The ancient Greeks referred to had searched for such an understanding primarily with this purpose in mind. Some progress was made through the centuries following them, as can be seen from the methods of treatment that were beginning to be used. The classical example of the treatment of Saul's melancholia by the inspired music of David found its followers later on. Throughout the early centuries of the Christian era and the Middle Ages we find definite attempts to treat mental and certain physical diseases by psychological methods and settings, as well as the efforts to understand the mechanisms of the disease and its cure on this basis.

The credit for the first important impetus in the progress along this line is due to the French school of the latter part of the 18th and beginning of the 19th centuries. Pinel in the treatment of mental disease and Esquirol in the description of the phenomena must be regarded as the founders of what has

come to be the modern attitude towards the mentally diseased. Although the group of German psychiatrists, centered about the illustrious name of Kraepelin, has been quite justifiably associated with the development of modern Psychiatry, its contributions were more along the lines of the analysis and description of the syndromes than with treatment as such.

The next important contribution was made by a series of what may be termed methods of "Psychological Healing," the essence of which was a real attempt to understand the nature of psychopathological symptoms for the purpose of treatment of mental disease. Taking their starting point from the movement instigated by Mesmer even before the days of Pinel, but discarding the theory of animal magnetism advanced by him, a number of methods have developed for the treatment of mental disease by purely psychological means. To these belong the efforts of Braid, Bertrand, Bernheim, and Charcot, with their studies of hypnosis and suggestion, the contribution of Janet and his followers to these methods as well as to the analysis of psychopathological phenomena, and finally the psychoanalytic method advanced by Freud. As the establishment of these methods and their successful application depended so much upon the appreciation of the psychological mechanisms involved, these investigators have made as notable contributions to the understanding of psychopathological manifestations as to their treatment, and in some cases even more. These will come up for consideration in the subsequent paragraphs. Finally we come to the contributions made by contemporary workers along these lines. The broad approach toward the mentally diseased person as a whole personality as we find it in the teachings of E. Bleuler and Adolf Meyer, the modifications and outgrowth of the psychoanalytic method as we find them in the contributions of Jung, Adler and others, have all enriched our knowledge of psychopathology at the same time as they have improved our methods of treatment.

II. *The Descriptive.* Here again we can start with the attempts of Hippocrates to describe and classify psychopathological phenomena, but lacking the driving force of necessity, this line of progress lagged somewhat behind the one

described above. The credit for the greatest influence in this phase of development undoubtedly goes to the German group of psychiatrists of the last part of the 19th and beginning of this century, chief amongst whom was Kraepelin. Although Esquirol and others following him have contributed a great deal towards description and the clarification of this field, it remained for Kahlbaum and especially Kraepelin and his followers to bring system and clarity into the tangled maze of psychopathological material. We must be careful not to minimize the contributions of this group by comparison with those that followed them and which were mainly concerned in the understanding of this material. We must always remember that clear description and classification of facts is as important as, and, in fact, must precede, the understanding of the nature of these facts. Of the more recent contributions of great importance we must mention above all the clarity of concept introduced by Bleuler, the vividness of description in the contributions of Wm. A. White and broad grasp of fundamental principles which is found in Meyer's grouping of psychiatric material.

III. *The Explanatory.* From the point of view of its main objective, this aspect of the development of psychopathology may be regarded as the one most closely associated with its primary interests. It is here that we find research most frequently undertaken for the principal purpose of clarification of concepts and insight into the nature of the observed phenomena, although, as was pointed out before, these considerations frequently grew out of a primary interest in the treatment of disease. In this, too, we must acknowledge our debt to the earlier efforts towards establishing relationships. Progress along this line, however, was rather slow compared with the rapid strides that accompanied the more pronounced interests in scientific research in general towards the end of the 18th and in the 19th century. Arbitrarily this progress may be considered in two sections: (a) Physiological or organic; (b) Psychological.

(a) *Physiological.* The early attempts at localization of mental functions or faculties and the determination of the

physiological substratum of mental activities were closely associated with the study of persons suffering from disease of these functions. In a large number of instances these studies have served as the starting points in the development of theories concerning the physiology of normal mental activity. The older contributions in this field, although far from being scientifically reliable, were of profound influence on, and, in some instances, actually served as stimulation for, future work. The systematic, although largely erroneous, attempt of Gall and his followers served, in the 19th century, as the background for the contributions of Broca and others, later to be followed, along different lines, by Wernicke, Hughlings-Jackson and others. These latter have opened up fields of research in which a great deal of work has been done and have been productive of many illuminating contributions. The early attempts of Kraepelin along experimental lines, notably with drugs, has been recently expanded, especially by the Heidelberg School (Beringer, Stein, Lindemann, etc.), and has brought with it information of vast importance. The works of Liepman, Pick, Head and more recently the contributions of the representatives of the Gestalt School such as Goldstein and others, have brought a great deal of light into the understanding of some of these phenomena. Along other lines, but still primarily associated with this phase of investigation, the contributions of the work of Pavlov on conditioned reflexes, the work of Lashley on the mechanisms of brain function, the researches of Schilder, Weizsaecker and others have further enriched our knowledge.

(b) *Psychological*. The contributions here have developed mainly in relationship to methods of treatment. Mesmer's practical results associated with his fantastic theories led to investigations particularly by Braid, Bertrand and later Bernheim which resulted in the establishment of the importance of the mechanism of suggestion. In Charcot's clinic where hypnotism found such vast application in the treatment of and research on the mentally diseased, a series of brilliant contributions were made, especially by Janet and his co-workers. The theories developed here, because of their great importance in the understanding of psychopathological phenomena, will

be discussed more fully in subsequent chapters. It was here that Freud, according to his own statement, came to the first glimmering of the theory which he developed later, that of psychoanalysis. This theory, probably more than any other, gave rise to a tremendous amount of research, both by those who agreed and others who disagreed with Freud's views. The contributions of Abraham, Ferenczi, Jones and Schilder on the one hand, and of Jung, Adler and Rank on the other, have all added to the understanding of these phenomena. Again we must leave the detailed discussion of these theories to future chapters. Of other contributions of importance along these lines, we must mention those of Dubois and Dejerine, those of Kronfeld, the phenomenological school and the psychobiological concepts of the Meyer School.

Chapter II

PRACTICAL EVALUATIONS

The Value of Psychopathology in Its Own Field

THE PROOF that psychopathology has reached a point in its development where it can be regarded as a distinct entity and not simply as a branch of some other subject, could not in itself justify its establishment as an independent science. Before taking such a step we would also have to ascertain whether it has definite practical uses as such. For this purpose we would like to discuss first of all the question of whether a science of psychopathology has any practical application in its own field, and then see whether as such a science it can be profitably applied in the fields of other sciences.

Since this subject is of comparatively recent development it will probably be best to approach the question through an investigation of similarly situated subjects in other fields. The most logical sources of such analogies can be found in present-day developments in the realms of biology. Students of this subject have within recent years undergone a radical change in their attitude towards disease and the phenomena which characterize it. There was a time when the phenomena or symptoms of a disease-process were considered merely as signs of disturbed function. It was thought that within certain limits an organism which has suffered a disturbance in the functions of one of its organs or systems can be approached primarily on the basis of regarding it as similar to its normal self but functioning without that particular system. This attitude, however, has now given place to a new concept which regards the diseased organism as a totally new structure, all of the organs and functions of which have undergone a change in the attempt

of that organism to adjust itself to new conditions. The so-called symptoms of disease, therefore, are really expressions of a changed organism functioning under a new setting. It was on the basis of this concept that pathology, for instance, has emerged as a distinct science apart from medicine on the one hand and chemistry or physiology on the other, to all of which it is nevertheless closely allied.

Thus if we take for example the phenomenon of inflammation which is a commonly occurring expression of pathological processes, we can readily recognize in the present-day attitude towards this the change which has taken place. When any part of the organism is injured and the usual signs of inflammation develop at that point, we do not any longer consider them merely as a sign of disease of that part. Instead of this, we have come to see that the different stages of inflammation really represent the attempt of the whole organism to throw into the particular part that was injured an altogether new series of reactions, the main purpose of which is to adjust the organism in such a way that the least amount of disturbance of function is to be assured. The increased flow of blood toward that part, the increase of certain constituents in the blood, the development of certain types of cells in that region, the breaking down of others, and so on, are all developed through a series of systematic stages, all of them interconnected as manifestations of an attempt at a new adjustment under unusual circumstances.

It can be seen here, then, that the development of pathology as a science in itself has a special purpose in mind, that is, to study these reactions in the light of their meaningful occurrence rather than as the symptoms of disturbed health, or as curious chemical or physiological phenomena. It is this concept, too, that has given rise to the development of psychopathology as a special science with a distinct application in its own field. It is true that when considered from the point of view of the normal individual functioning under normal conditions, the adjustment which takes place in the case of a mental disease can be considered as inadequate. It is also true that from that point of view these phenomena may be considered as indica-

tive of disturbed mental health. But when we consider the fact that the mentally diseased person develops these phenomena as a result of some disturbance within himself or as a reaction to overwhelmingly difficult conditions placed upon him by the outside, we can see that the manifestations that do develop are expressions not only of one part of the individual but of the whole person attempting to adjust himself to these new conditions in a way which to that person is the only one possible.

Thus a new objective comes into view. We are not interested simply in studying these phenomena as an indication of disturbed function, which is the main objective of clinical psychiatry, nor are we primarily interested in studying them from the point of view of their being deviations from the normal psychological methods of reaction, but we are interested in studying them as indicative of a new person that has come into being and as expressions of his attempt to adjust under new circumstances. The investigation of any one phenomenon, for instance, the hearing of an imaginary voice, will thus assume altogether new objectives. It will not be for the purpose of discovering in what special types of diseases such imaginary experiences occur or how a person having these experiences should be treated. Neither will it be for the purpose of discovering in what fashion this differs from normal perception. Both of these lines of investigation will still be of interest to the psychopathologist as well as to others, but the first one will be mainly the goal of the medical man, the second that of the student of pure psychology. The psychopathologist will be principally interested in the investigation of the purpose served by this experience in light of the new conditions under which the individual is living. He will also try to understand the nature of this experience in itself, the mechanisms of its development, its relationships to the organism as a whole, and to other expressions of a psychopathological nature that may be seen in this process of newly instituted methods of adjustment.

Here again we see, as in the previous chapter, that the objective of a given science determines to a great extent the

lines of investigation which will be followed in it and the attitude that the student of the subject will take in carrying them out. This attitude and its objectives will also determine the very organization of such a science as psychopathology, for it will not develop along the lines of the accepted classification of mental diseases wherein the phenomena are dealt with according to the order in which they develop in different types of diseases and their relationships to certain types of treatment. Nor will it be organized along the lines of the systematic approach of normal psychology wherein we would deal with the psychopathological phenomena merely as deviations from normal activity. The organization here will have to follow the same principles that were indicated in discussing its objective; in other words, we will study these phenomena in relation to their meaning as expressions of adjustment of the new organism to the new set of circumstances in which it finds itself.

The Application of Psychopathology in Other Fields of Science

Psychopathology occupies a rather unique position in relationship to other sciences. During the course of its development, through the ages, it has undergone various changes in its concepts as well as the attitude taken towards it. The unusual forms of behavior and experience that occur in mentally diseased persons have been successively looked upon as expressions of supernatural forces, malicious intentions, results of physical injury, emotional disturbances, divine gifts, and numerous others. Even with the present-day more adequate understanding of their nature it still occupies a position in that shadowland which lies between the mental sciences on the one hand and the biological on the other. It is not surprising, therefore, that as one continues to learn more about the nature of these phenomena they assume greater proportions in throwing light upon the understanding of problems of the different sciences belonging to both of the above fields. There is a group of sciences, however, which is more closely related to psychopathology and in which a thorough understanding of

this subject is particularly useful. The most important of these are as follows:

(1) *Medicine*. The relationship of psychopathology, to medicine has been discussed in the first chapter. We must always remember that psychopathology has developed to a large extent out of the investigations of students of medicine on the one hand and those of psychology on the other, and the relationship to these two is particularly important. Although, as we stated above, from a purely medical point of view one is interested in these phenomena simply as symptoms of a disease-process, the understanding of the nature of these, their causes, and manner of development has helped materially in the understanding of the causes of the symptoms and in our attempts at treatment. It must be stressed, however, that although very helpful in the study of medicine, or in the more restricted field of neuropsychiatry, it never should or could take its place.

(2) *Psychology*. The relationships here have also been discussed above. Recent investigations in psychopathology have shown the very close relationship that exists between the mechanisms of development of these phenomena to those observed in psychology, especially in genetics. For example, our understanding of child psychology and of the developmental organization of the mind of the adult individual has been enriched by the knowledge gained from the study of the regressive aspects of the development of mental diseases. Disturbances of memory, of perception and of thought as well as the relationship of the dream life to these and other disturbances have clearly shown certain lines of investigation that can be followed in the studies of these functions in normal individuals. From this point of view a knowledge of psychopathology is of great help to the student of pure psychology and some of the branches of applied psychology. But it must be emphasized that the justification of psychopathology as a science is its basis, comparable to that of physical pathology—the concept that abnormal mental behavior is the attempt of a new organism to adjust to new conditions. The expressions of this attempt, looked at from this point of view, remain within the field of

the abnormal. Their application to the normal cannot be made directly but only on the basis of analogy and inference.

(3) *Mental Hygiene*.⁶⁷ Within recent years great emphasis has been placed upon the attempt to prevent mental diseases. The whole of mental hygiene has been developed out of the recognition gained by the physician that mental diseases are frequently acquired in early life on the basis of certain conditions to which the child is subjected. If these conditions could be altered at the proper time, a great many of these diseases could be prevented altogether, or could be prevented from assuming such serious proportions. Mental hygiene, too, has subsequently developed into a distinct scientific attempt, but has not as yet reached its final goal. Its further development depends primarily upon our progress in the understanding of the causation of mental diseases and the manner of development of the phenomena that are observed in them. An adequate knowledge of psychopathology, therefore, since it deals directly with these problems, is of distinct advantage to the mental hygienist. We must remember that the conditions under which human beings live are of such rich variety, especially in their interrelationships, that at no time can we have two persons going through exactly the same development. Furthermore, the intricacies of human behavior and experience are thus far so inadequately understood that what may appear as the sole cause of the development of a mental disease in one person may not act as such an agent in another. The mental hygienist, therefore, can use the knowledge gained by the psychopathologist, but will also have to use it in a qualified rather than dogmatic fashion.

(4) *Child Welfare*. As was stated above, the major portion of phenomena observed in mental diseases develops out of the substratum furnished by the early years of the growth of the organism. It is there that the manifestations of the mentally diseased adult first have their roots. In our attempt to determine the conditions under which the child can develop at its best and give the organism the opportunity of growing up toward adequate adjustment, the knowledge gained through

a retrospective study of the mechanisms in psychopathology is of great assistance.

(5) *Education*. The understanding of psychopathological phenomena, their development and relationship to the total personality of a given individual, helps in controlling and establishing situations in educational programs. It gives us useful insight into the relationship between the teacher and pupil, the effects of such relationships upon the educability of the pupil and the mental reactions to the educational situation. It does not, however, exhaust all the available conditions under which education can be carried on with the best possible success.

(6) *Sociology*. The phenomena which we observe in psychopathology are true not only of the individual but can also apply to certain groups. In his attempt at adjustment to a difficult situation the mentally diseased person will, of course, affect the group in which he lives. The substitute reactions to which he has recourse quite frequently will bring him into clash with his environment, and in that way not only cause him to act as a foreign body in his group but actually produce in that group a certain attempt at adjustment to this member. Furthermore, certain reactions which the individual himself takes toward a given situation of an unusual type may also be followed by the whole group in response to similar situations. It has been noticed that much similarity can be seen between unusual social situations, such as waves of fanaticism, revolution, wars, etc., and the phenomena that are studied in psychopathology. The individual, therefore, forms a concentrated miniature of his group, and as it is easier to investigate the one individual than the whole group, a thorough understanding of the mechanisms involved in psychopathological reactions may lend insight into the development of social disturbances.

(7) *Fine Arts*. Recent investigations into the field of literature, music, and the other arts have shown the close relationship that exists between certain types of artistic expression and psychopathological phenomena. Furthermore, the frank and transparent motives underlying artistic productions of

mentally diseased persons tend to throw light upon the more intricate and less accessible mechanisms of similar functions in normally constituted persons. In addition to this the investigations of the lives and personalities of some great artists have shown the close relationships that exist between conflicts and difficulties in adjustment of these persons to their environment and some aspects of their artistic productions. With the aid of psychopathology it is possible to obtain a better understanding of some of the phases of these creations. It must be emphasized, however, that the whole field of creative art is too broad and too intricate a subject, altogether too deeply interwoven with the richness and the complexity of human nature, to be entirely placed on the basis of one of its aspects.

(8) *Religion*. As we go through the various stages and ramifications of the development of religious experiences of the human race we find in it certain aspects of compensatory activity and expressions of deeply-seated motives both in those who lead and those who follow these leaders. In the development of psychopathological phenomena we find a close relationship of some of its phases and the religious experiences in the mentally diseased person as well as in normal individuals. This phase of interrelationship is not at all clearly understood as yet, but certain suggestions for investigation are available along these lines, and the field of psychopathology abounds in the possibilities it offers for the investigation of the relationship between it and religion.

Chapter III

THE SOURCES AND ARRANGEMENT OF THE MATERIAL

Sources of Material

THE MATERIAL with which we are dealing in the field of psychopathology is obtained from a rather complicated and variable set of sources. From what has been discussed heretofore, it must be clear that the nucleus around which this material is centralized is the mentally abnormal person, and, consequently, the patient himself presents the most valuable source. We must remember, however, that the individual's reactions are closely, almost inseparably, connected with and dependent upon the particular situations in which he is reacting in an abnormal way, as well as the background in the form of his phylogenetic and ontogenetic development. The phenomena themselves, although primarily obtained from studying the patient, cannot be evaluated as being normal or abnormal unless we have a definite understanding of the medium in which the patient lives. When we come to the interpretation of these phenomena, that is to say the understanding of their nature, the mechanisms of their development, and their causative factors, we may have to go far afield to search in the previous life of the patient as well as the environment in which he was brought up and that in which he was living at the onset and development of his abnormal behavior. Because of that, it is important for the student of psychopathology first of all to appreciate as thoroughly as possible the sources from which this material is obtained, how to search for pertinent facts in the rich variety of data that present themselves, and how to evaluate their reliability.

During the development of neuropsychiatric, psychological, and psychopathological methods of approach, we have gradually come to establish certain acceptable and reliable techniques which every student of psychopathology should have at his finger-tips to be able to proceed precisely and systematically in the investigation of an individual case. The ability to grasp the significance and intricacies of this technique, however, is very much dependent upon a knowledge of the different possibilities in the form of phenomena, those theories that have been advanced for their interpretation and which have subsequently proved to be correct, and the manner in which certain of these phenomena can be grouped together as representative of commonly occurring pictures. For this reason it is best to defer the discussion of an outline of this technique until after the subject matter itself has been presented. The possible sources of the material, however, should be appreciated by the student, if only superficially, before the discussion of the phenomena themselves is attempted, and it is because of this that we are taking up now a brief outline of this subject.

In the center of a psychopathological study we deal with the person who has shown either in his behavior or in his experiences the expressions of abnormal mental activity. In our investigation, therefore, we start with the person himself, preferably unhampered at the beginning by detailed investigation of antecedents or environmental factors since they may influence us by giving a preconceived idea as to what we are going to find in this particular person. It is important, however, to start with a brief statement of what those factors were that made either the patient, or those around him, consider him mentally abnormal. This, which in psychiatric terminology is known as the "chief complaint," should serve as the reason for our investigation and as the nucleus around which our investigation is built up. We then proceed towards the description of all those factors in the person's behavior or experience which can be looked upon as expressions of abnormal mental activity. Roughly speaking, all these factors may be classified into two major groups: (1) those that can be observed ob-

jectively in the person's behavior; (2) those that have to be obtained from the person as representative of his experiences. It is true, of course, that a great many of the things that we observe objectively in the patient's behavior may give us a clue as to what the person's experiences are, and conversely a number of data that the person gives us as his experiences may give us clues as to further objective changes that we have not been able to perceive in our observation. From this point of view the two are closely interrelated and can be looked upon as only arbitrarily and not absolutely separate. The methods of obtaining the data in each of these two fields, however, are different, just as there is a great difference in their relative reliability, and, hence, in the manner in which we evaluate their ultimate significance. We start out, therefore, with the first of these two under the designation of observation.

Observation. Generally speaking, the material which we obtain by observation is, from a scientific point of view, the most reliable. It may not be as complete as that which we can sometimes obtain from a study of the patient's report of his experiences, nor is it usually so easy to understand the meaning of these expressions as it sometimes is in the case of experiences. What we observe, however, is objective, and if the investigator can maintain a neutral, unbiased attitude towards this part of his investigation, they will always remain as reliable facts regardless of their interpretation. It must be remembered in the evaluation of these facts that the behavior of a mentally abnormal person cannot be looked upon as absolutely parallel to that which we observe in a normal person. Quite frequently reactions which we observe in an abnormal mental state signify, or are related to, internal experiences which in a normal person would produce a diametrically opposite type of expression. The patient may wilfully or unconsciously disguise his experiences at the time of the examination, and an expression of joy may be used to cover up a feeling of depression, or an expression of concern may be produced in the attempt to cloak an attitude of indifference or disinterestedness. It must be remembered, as has been emphasized before, that the mentally abnormal person is adjusting to unusual cir-

cumstances and in so doing is sometimes forced to use unusual forms of expression. But if we maintain an objective attitude in that we record facts as we see them without regard, at first, to what they mean, these facts, as such, will remain incontrovertible.

Another point of importance to be kept in mind in recording our observations is that of avoiding the tendency toward projection of the investigator's own experiences and feelings and considering them as positive occurrences in the behavior of the individual under observation. It is not always easy or even desirable to disregard these completely. The experienced student of psychopathology may have developed in the course of his studies of psychopathological material a certain knack of perceiving changes or deviations in the behavior of the individual that would otherwise remain imperceptible. These "hunches" or intuitions, whichever we may want to call them, are frequently helpful in affording starting points for important investigations and findings. For the experienced student it is just as impossible to avoid using these means of observation as it is unwise to disregard them. The danger of being led by them into erroneous conclusions could be materially reduced if the investigator remembers that they are in themselves essentially different from observed facts which can be stated in clear, logical terms. In recording such observations, it would be best to qualify them as such and differentiate them clearly from those facts which can be observed by purely objective methods.

With these points in mind, we proceed towards the observation of the individual. Every fact which appears to be of importance should be stated, and it is well to start with the general description of the subject of observation. We note the manner in which he receives us, the conditions under which the interview takes place. Whether the patient walks into our office or we come into his room, we should note his first reactions in relation to the investigator as well as to the environment in general, the absence or increase of general activity, the amount of interest he seems to show towards things around him, his facial expression, his posture, his demeanor, his move-

ments, etc. If any form of organized motor expression takes place such as saluting or handshaking, the manner in which it is carried out is noted. If he responds with speech, the tone of the voice, the pronunciation of the words, the construction of phrases and sentences is of importance. If other forms of expression are present that may not occur in normal behavior, such as grimacing, mannerisms, dancing, peculiar forms of dress or decoration, these too should be noted. If the patient makes any statements, the adequacy of the reaction of his whole organism in relation to these statements should be considered. Do expressions of sadness accompany the recounting of a saddening circumstance or are the accompanying expressions unusual? If they are adequate, are they exaggerated or diminished? The whole range of facts in the patient's behavior that should be observed and recorded can only be appreciated after we have secured a more or less adequate fund of knowledge as to the wide variation of possibilities we may expect.

Experiences. We next proceed to the investigation of the patient's inner experiences. This is not always as easy as is the case in observation. The person cannot help behaving. His very lack of motility or motorized expression of any kind is a fact that can be recorded in observation and is of importance. If, however, the patient refuses to divulge what goes on within him, it is practically impossible at that particular time to tell correctly what his subjective experiences are. It is true, for instance, that in a person who is depressed we may be able to judge by the facial expression something of what is going on within him. The person who jumps suddenly and shies away from the investigator may be assumed to be afraid. A person who appears to be listening with his hand cupped at his ear may be assumed to be hearing some sounds which the investigator cannot perceive. The person who looks dumbfounded and at a loss may be perplexed. All these, however, although they should be recorded, should be characterized as assumptions, and we should guard very carefully against accepting them as anything but assumptions. Only when a person is willing to talk do we have a real means of ascertaining his subjective experiences.

Some individuals may talk very freely, in fact much more freely than the normal individual does. The patient may start with a torrent of words expressing his dissatisfaction, irritability; or, conversely, his great happiness and hopefulness. He may curse everyone around him and denounce them or tell us in a very florid way how wonderful he considers his environment. It is best, if possible, to record the statements made by the patient in his own words, although at times the person may become so voluble that it is necessary to record only certain parts of his production.

In experience even more than in behavior, we must guard against considering the productions of the individual as being of similar value to those of normal persons. The psychoneurotic woman may, in the manner of Lady Macbeth, protest too much, may go to great lengths in telling us how much she is in love with a person whom in her obsession she wishes to murder. Here, too, so long as we record the statements of the person in his own words, we have facts which in themselves are true although in their interpretation they may have to be dealt with in a special manner. We must keep in mind the possibility of the occurrence of unusual forms of experiences in the mentally diseased person. Imaginary perceptions, peculiar twists of evaluation of the environment, assumptions and suppositions based on certain trends that take place within the person, and that have no reference to things that occur—all of these must be recorded. We must emphasize that this is only a brief indication as to what facts are to be looked for and recorded, and that a complete knowledge of all the possibilities can be obtained only through an exhaustive study of the whole field.

History. The patient's behavior and experiences as we see them at the time of our interview represent a frozen section, so to speak, of a particular moment of the life of that individual. Human beings are dynamic entities that live through time and in its flux change to a greater or lesser extent from one moment to another. No complete appreciation of the significance of any occurrence observed can be obtained, unless we have an opportunity to learn what has gone on before, and what will develop after the moment during which we interview

the person. The next step after this interview, then, in our attempt to get at sources of material for our investigation, is the obtaining of an adequate history. In this we must remember first of all that the person in his own development represents only the end product of the sum total of his phylogenetic history and, therefore, we proceed towards an investigation of the patient's antecedents. We go back as far as possible in the family background to look for signs of abnormal adjustment in his ancestors or collaterals. The possibility of a pre-existence of certain traits and potentialities in that background will help us to see how much of an unusual substratum in the form of constitutionally inherited predisposition or early acquired pattern the patient has received from his immediate family, from the collaterals, or from the group in which he first found himself facing life.

From there, with the picture of the person's original equipment, we proceed towards a complete investigation of those experiences in his life which have helped in making the situation unusual, thus making it necessary to employ unusual means of adjustment. Both the investigation of the family and the personal history of the patient must be undertaken in a certain standard fashion, the outline of which can be appreciated only after the field of psychopathology has been covered. The next source of material is the investigation of the history of the particular difficulties which are presented by the patient at the moment; in other words, the history of his abnormal mental activity. It is true that in a great many mentally abnormal persons the development of this condition may be so closely interrelated with his development from early infancy that his personal history and the history of his present condition may really coincide. In other patients, however, there may be a period of greater or lesser duration in his previous life during which he was mentally not different from others in the same milieu. Then we will have to find out when the first expressions of abnormal mental activity showed themselves, under what circumstances, and what attracted the attention of outsiders or the patient himself to these as being abnormal. All these components of the history can be obtained from different

sources. We try first of all to get as many details as possible from the patient himself. However, these must be recorded as such, because in his abnormal attitude toward things the patient may color a great many of his experiences, or actually invent others, in the light of his present attitude toward them.

The history can never be complete unless it is checked, if possible, by a personal interview with other people who have known the patient and who can also give us information concerning his antecedents. They will also be able to fill in the information concerning the patient's previous expressions of his mental disease, and thus give us a picture of this disease as it changed during its progress. In this way we may sometimes obtain pictures of abnormal mental activity that are totally different from the one which is shown at the time of the interview. Other means are available in our attempts at the investigation, not only of the history but also of the behavior and experience of the individual. In a large number of cases the person may have recorded his own experiences or behavior previous to the interview in the form of letters, diaries, autobiographies, and productions of other types such as drawings, paintings, construction of apparatus, etc. A further source of information to complete the picture is a thorough investigation of the person's environment preceding the interview. In one case in the experience of the writer most of the information concerning the patient who lived by herself for a long period of time preceding her admission to the hospital was obtained through a study of the room in which she lived. For years preceding her admission to the hospital and during the gradual development of her condition she gathered a number of articles of an apparently useless nature in her room so that the picture presented by this room at the visit after the patient's admission was that of a complete psychopathological museum.

Following the interview, the understanding and interpretation of the material obtained must be further completed by a series of observations during the progress of the condition. The changes brought about by the interview itself, the new factors introduced by the relationship to the psychopathologist may bring to light new factors which should be recorded, so that

subsequently they can be utilized in trying to come to a conclusion as to what these expressions mean. It is because of this that, in most cases, the adequate understanding of the condition and a complete picture of it in our minds must be deferred until after a period of observation has elapsed.*

Psychopathology as a science includes not only the observation and description of phenomena but also attempts to understand their nature as well as the mechanisms of their development and their causation. Having obtained all this material we next proceed toward its classification and its interpretation. Experience has taught us that certain sets of phenomena, developing in certain ways, combine to give certain complete pictures. As valuable sources of material for the psychopathologist, then, we must also consider the experiences of other psychopathologists in the field of classification and synthesis of these phenomena, which give us a better understanding of their interrelationship and the reason for their occurrence. During the development of psychopathology a great number of theories have been advanced as to the causation and manner of development of these phenomena. It is true that the major portion of these has subsequently proven to be unreliable. Some of them, however, have been shown to be experimentally, or at least empirically, adequate, and in our attempt at the understanding of this branch of psychopathology we should avail ourselves of theories of this type and of the experience of workers who have carried on these investigations before us.

Arrangement of the Material

The object of this book is the presentation of the general field of psychopathology. As in all such presentations, and probably more in the field of psychopathology than in others, a systematic exposition, if it has very decided advantages, also

* The methods employed during this period will vary with the different patients and the facilities available. Where the patient is productive and frank, a great deal can be learned from the record of his behavior and communications. In some cases, however, special experimental investigations such as the establishment of artificial situations, the use of certain drugs, psychological tests and others may have to be instituted for the purpose of gaining an insight into the condition.

has its drawbacks. Before going over to the outline of our form of presentation it may be best to appreciate both of these and the reasons why a systematic presentation has been chosen in face of its disadvantages. To be able to be understood readily, a subject must be presented in a systematic fashion. The mere enumeration of all possible facts that may occur to one's mind as belonging to this field and the interjection here and there of an explanatory note as to the nature of these facts would result in a disorderly mass of material that could not be of practical use. A systematized presentation has as its prerequisite the consecutive and consistent following out of a certain trend of thought with a definite objective in mind. We gain the conception first of all of what it is that we wish to present and what our attitude will be in presenting it, and arrange our material along a program furnished by this conception in such a way that the interrelationships can be clearly seen. Our objectives and attitudes, as was outlined in the previous chapters, consist in regarding psychopathological phenomena as the expression of a special type of adjustment of an individual to certain circumstances. In our presentation, therefore, we will concern ourselves with the material as it represents adjustments of this type and with the circumstances that make such an adjustment necessary, as well as how this particular type of adjustment is undertaken.

In doing that our field, of course, may incur the danger of too much restriction as well as a certain amount of forcing of mental activity into grooves which cannot adequately hold it. The total of possibilities in the field of abnormal mental activity, even if all of it were known, cannot be fitted into an all-inclusive system. At best we can only hope to indicate the different categories under which they occur and in each one deal with the most commonly occurring expressions. In addition to that, since conditions under which human beings live and to which they have to adjust, change with the progress of the race, there is always the probability that altogether new phenomena, belonging possibly to new categories and understandable only in the light of newly acquired points of view, will constantly crop up. For this reason any system we devise can

be only temporary and will always be subject to change to meet the new conditions. This is one drawback to any systematic presentation. The student of psychopathology should appreciate this fact and in his future work be open to receive new experiences and be prepared to deal with them in an original manner. No attempt will be made here to provide for such contingencies, for even if it were possible, it would hamper very materially a presentation of important knowledge that at present forms the central feature of this subject.

Another disadvantage of systematization is that it frequently is used as a medium to present some single theory. In such presentations it is common to find that the author starts out with a discussion of the theory with a preconceived prejudice in favor of it. The reader, in order to follow through the material with the author, is forced to accept this biased opinion, and the material that is presented following the discussion of the theory is naturally forced into the grooves along which this theoretical consideration runs. It is quite clear that such a presentation will not do justice to the subject. In the first place, no theory has as yet been presented that could be universally accepted as the "open sesame" to all the variations and ramifications of abnormal mental activity. Secondly, it tends to focus the attention of the student on explanation rather than objective observation of facts. Finally, as at best it is only applicable to certain aspects of pathological mental activity, it necessarily brings these into the foreground, and one loses sight of the other aspects which are thus forced into the background.

One could argue that a presentation of this type is possible if we could discuss at the outset all the available empirically established theories in an unprejudiced fashion, but this is hardly less dangerous, for prejudice and bias are so deeply rooted in human nature that, no matter how well grounded one may be, it is impossible not to lean more favorably toward one theory than another, not to mention the fact that few of us are so thoroughly acquainted with all possible theories as to be able to present each one of them adequately. It is for this reason that in close parallelism to the form of presentation adapted by Jaspers⁴⁶ we have chosen the following method:

I. *Phenomenology*. We start out with a presentation of the phenomena as they are observed, this being included under the designation of phenomenology. In the presentation of these phenomena, we are primarily concerned in their description and grouping under categories, which have as their foundation the attitude that we are studying certain special forms of adjustment. By adjustment is meant, of course, the activities of the individual in whatever form they take in the presence of the conditions in which he has to function. The sum total of all these activities can be regarded as classifiable into three general groups, and these will be presented as follows.

(1) *Pathological behavior*. By behavior is meant the total of *observable* activities in a given situation. As we observe the individual adjusting himself to a situation in which he happens to find himself, we can abstract a certain number of phenomena which can be objectively recorded and which may be subdivided into the following groups: (a) the features characteristic of the general exchange of activities between the person and his environment; (b) reception, which comprises the manner in which stimuli are received by this person from the situation; (c) intellection; and (d) the expression of his responses to the outside world.

(2) *Experience*. In addition to those components of mental activity which can actually be observed by the outsider there is a group of phenomena which are also manifestations of adjustment but which run their course within the individual himself. These can be appreciated only indirectly and cannot be observed. They are grouped under the term of experience and may be divided into the following sub-groups: (a) The general attitude of the individual to factors within the situation occurring either in himself or in his environment, or both. (b) The subjective components of reception, that is, the act of appreciation of the effects of stimuli by the individual himself and within him. (c) The evaluation of the meaning of these stimuli to the person, regardless of what their true nature may be. We do not in this section of phenomenology consider any expressions of these experiences, although within the individual himself some of these phenomena may serve as expressions, but

when they are externalized so as to be appreciated by the outside world they necessarily fall into the field of behavior.

(3) Finally, we deal in phenomenology with a series of what may be called *physiological concomitants* of behavior or experience. By these we understand a group of phenomena which can be observed objectively and which apparently run their course coincidentally with the phenomena enumerated above. Here we deal with such factors as changes in the functions of different organs—the cardiovascular, respiratory, and so on), the electro-physiological reactions, metabolic, and others.

II. *Determinants and relationships*: all the phenomena mentioned represent the groundwork of psychopathological material. They are the entities out of which psychopathological reactions are built and which, when recorded and classified, will give us the factual data, the nature of which we can then attempt to determine. The next step is to deal with the manner in which these data can be further investigated for the sake of learning their mutual interrelationships, their significance to the personality as a whole, the causes of their occurrence, and the manner in which they have developed. For the purpose of presenting these systematically it will be necessary to appreciate their fundamental nature and the categories to which they may belong.

The causes and development of psychopathological phenomena are not exhaustively known as yet. In some of them we may know the apparent causes but not understand the manner in which they develop; in others, with a fairly clear grasp of the manner of their development, we are totally or partially ignorant of the etiology, and in a regretfully large number of them we know neither the causes nor the manner of development. This can be said also of the way in which these phenomena are related to the whole personality as well as to one another. In a general way, however, and in a sort of “a priori” manner, we can say that the fundamental issues in these problems can be correctly appreciated. Thus it is logical to assume that the causes of these phenomena, whatever their specific nature may be, must find their ultimate source either in

the background of the individual, that is to say, his constitutional inheritance, or in those factors to which he has been subjected during his development and life until the moment at which his abnormal reactions were observed, or in the conditions that prevail at the time of the reaction in the situation as a whole. Different theories have been advanced to explain the importance of each one of these three sets of factors, and they will be taken up under the following headings: (1) phylogenetic determinants, (2) ontogenetic determinants, (3) a) relationships within the situation, b) organic determinants. In these we will discuss the relative importance of the different factors, possible combinations in certain cases, and the manner in which they influence the development of pathological mental activity. The situation is very similar in our attempts to understand the interrelationship of these phenomena as well as their relationships to the personality as a whole. At different times and under different points of view, well supported theories have been advanced concerning the structure of the personality, and the relationship which exists between its various components and the manifestations of psychopathological phenomena. These will be discussed under the concept of "Personality Structure."

III. *Synthesis*. The phenomena dealt with in psychopathology, the manner in which they develop, and the factors which bring about their occurrence do not all find expression in each case of mental disease. In fact, each case is usually found to have a picture peculiar to itself. Throughout the ages, however, it has been noticed that certain types of phenomena seem to combine very frequently into fairly well circumscribed and recognizable pictures. In the field of psychiatry we speak of these as disease entities. Although they never present clearly-defined lines of demarcation, they nevertheless have certain features in common which are of help in arranging them into what can be regarded as clinical pictures. In some cases one can go even further in stating that some of these picture complexes have not only certain specific characteristics, but may have special commonly occurring types of development and causative agents. The arrangement of the psychopathological

material into such pictures will comprise the last part of our presentation under the heading of *synthesis*. In this part we will take up first of all the different possibilities of classification and then the usual form of classification accepted in clinical psychiatry. It must be understood, however, that since the psychiatrist is mainly concerned in the treatment and management of the cases, the classification accepted is mainly of diagnostic significance; that is to say, it serves the purpose of recognizing the type of disease in order to help in outlining the methods of treatment, management and the prognosis of the future progress. In psychopathology, however, our interests lie more directly along the lines of understanding these phenomena in terms of adjustment to special types of situations. Because of that we will, at the end, undertake a classification or synthesis of the phenomena based on this principle rather than the one which is followed in clinical psychiatry.

PART II

PSYCHOPATHOLOGICAL ANALYSIS:
PHENOMENOLOGY

Chapter IV

**THE PSYCHOPATHOLOGY OF BEHAVIOR
IN GENERAL**

General Remarks Concerning Phenomenology

IN THIS part we wish to undertake an analysis of the material into its various components and a description of these as they are actually observed, regardless of what their meaning or determinants may be. This is an essential feature in the presentation of a scientific subject as it facilitates the systematic grasp of the material with which it deals, but it must be appreciated that there are dangers, which can be avoided only by a proper appreciation of them. The first and most important of these is that the different phenomena may come to be regarded as actual, independent entities instead of arbitrary abstractions that can exist only in the setting of a whole picture. When we speak, for instance, of the hearing of an imaginary voice as the phenomenon of hallucination, we do not mean that the hallucination is an isolated entity, apart from the rest of the personality. It is really an artificial abstraction which is rendered necessary, because in describing the activities of a certain person in a given situation, and in using words for this description, we are forced to break up the configuration of the activities comprising the whole picture of adjustment into arbitrary components. These components can never exist by themselves and are always inseparable aspects of the whole. It is especially in our attempt to understand the meaning of these phenomena and the manner of their development that we realize how closely they are related to the whole situation

and how difficult it is to appreciate them as independent units. If this is borne in mind the phenomenological approach will give us the advantage of a clear presentation without the risk of obscuring the reaction as a whole.

Another difficulty experienced in this kind of approach is that introduced by the use of categories. Phenomena, to be presented systematically, must be classified into groups, but in doing this we frequently run the risk of placing into one category a phenomenon which may have some characteristics belonging to another category. Thus, for instance, the phenomenon of "dejection," inasmuch as it implies a certain type of facial expression, posture, etc., belongs to the category of behavior, but in its characteristic of the feeling of sadness it must be described as experience. This difficulty can be obviated by regarding these categories as closely interrelated and not subject to definite demarcations, and by defining the terms used in such a way that they will stand only for those characteristics that belong to the special category, even if, in their common usage, they may be employed in a broader sense. In the use of terms, furthermore, we must be aware of other sources of error that are likely to be introduced. Terms are man-made symbols, and as such depend a great deal upon the user. Such words as Instinct, Mood, Will, etc., have become classical examples of symbols which stand for widely variant concepts depending upon the author who uses them. Furthermore, one term may designate different concepts depending upon the general setting in which it is used. Thus, in speaking of personality structure, we use the term *unconscious* to designate a certain level of the personality, whereas in describing the reactions of an individual we may use this term to designate a lack of responsiveness to stimuli. There are numerous other misunderstandings that can be brought in by the use of terms, all of which can be obviated by proper definition.

In our presentation in the following chapters we shall discuss psychopathological phenomena, in accordance with the plan outlined above, under three general categories: (1) Behavior; (2) Experience; (3) Physiological concomitants.

Concerning Psychopathological Behavior

The behavior of a person in health or in disease can be defined as the sum of all the observable activities of that person in the given situation. At first glance it may appear not altogether justifiable to consider that all the person's behavior is composed only of those activities which take place in relation to a certain situation. It might be argued that some of these activities may occur in relation to impressions or experiences that have occurred at some time during the past of this individual. To appreciate the justification of defining behavior as we have done above, we must understand what is meant under the term "situation." Human beings, as do all other organisms, live within the medium called "environment." Although for practical purposes one thinks of the organism as an entity within that environment, one cannot think of this entity as existing without the environment. Furthermore, in their existence these two are so closely interrelated that the separation of them into two components, that is, the organism and environment, is only arbitrary and can never, even theoretically, be considered totally apart. Whatever activities the organism undergoes must be related in one way or another to its environment. By "situation," therefore, we mean the inseparable combination of the person and his environment.

It must be further appreciated that in the case of a biological system the organism and its environment are in constant state of change, not only in themselves but also in their relationships to one another. This mutability, which is a necessary condition of any dynamic system, does not take place in the form of a series of pictures replacing one another but in the form of pictures superimposed one on the other. When we speak of an organism, therefore, we mean not only that particular part of it which happens to be in the foreground at the time when we observe it, but the organism as it has evolved through its history, the various experiences represented in it in the form of more or less distinct impressions added to the organism itself. This is also true of the environment, for it, too, undergoes the same series of changes and retains the same character-

istic imprints of its history. Activities, therefore, that take place within this situation are due not only to the particular interaction of that part of the organism and its environment which exists in the present, but also those impressions that each has received throughout its existence. It is because of this that we say that the behavior of the individual consists entirely of the observable activities that take place in relation to the situation as it is at the moment.

The number of all possible activities that constitute the behavior of human beings is, of course, so vast that it cannot be enumerated in any all-comprising list. Furthermore, the change in the system being a progressive one, there is always the possibility of new types of activities coming into view which probably have never been observed before. For practical purposes, however, we can regard these activities as belonging to certain definite groups depending upon the nature of the behavior of a living organism. These are first of all divisible into two large groups, special and general, within which further subdivisions can be made.

(1) *Special*. From a biological point of view all the observable activities of an organism adjusting itself to a situation may be regarded in reference to three main functions: (a) *Reception*. By this we understand the activities by which the organism receives impressions or influences from the situation itself. The special type of adjustment that the individual establishes will depend materially upon the degree of completeness and perfection with which these influences are received by the organism. The reception of these influences may be accompanied by certain subjective changes within the organism itself which will be dealt with in the chapter on Experience. In behavior we deal with those components of reception that can be recorded as observable activities of the individual. (b) *Intellection*. By this we mean the activities concerned in the determination of relationships between different factors in the situation, and in the type of response to be given by the organism. The processes involved take place within the organism itself and are closely associated with activities that are subjective in nature and belong to the field of experience. Some

of them, however, can be appreciated objectively and evaluated in terms of the type of adjustment they help to determine.

(c) *Expression*. This includes all the phenomena which can be objectively observed as coming from the individual and directed toward some or all contents in the situation. The nature of this expression is determined to a large extent by the first two functions, but is dependent also upon the means and methods available at the time for such expression. It is important to appreciate this since the extent to which the adjustment is considered adequate, is quite frequently judged on the basis of the type of expression observed.

(2) *General*. The sum total of activities which make up the behavior of the individual in a given situation can be regarded as comprised in the three groups of special functions described above. Each of these functions has certain characteristic features which are specific to it and which may be disturbed in cases of psychopathological behavior. In addition to these, however, we also find a certain number which may be characteristic not only of one special group but of all the activities observable in an individual at a given time. The rate of speed, for instance, with which all these activities take place, their direction, a greater or lesser quantity, etc., may at times characterize all of the activities rather than any one exclusively. These general attributes can be described under a group designated as the "features characteristic of behavior in general." For the purpose of a clearer appreciation of these groups it may be well to present briefly some records of the behavior of patients as one observes them.

CASE I. A 32-year-old woman who was admitted to the hospital because of an acute mental excitement that had developed shortly after the birth of her child. A short time after her admission she was presented before a class of students in psychopathology. The following is the description of her behavior. She entered the room well ahead of the accompanying nurse and as she walked from the door to the chair that had been placed for her she turned around to look in all directions with quick, graceful movements. She sat down in the chair before the suggestion for her to do so was completed and immediately began a series of voluble

statements, some of which were in response to questions put to her, others offered as spontaneous productions. Her bearing was jaunty and carefree, and her personal appearance indicated a desire for effect, with her hair elaborately curled and her dress carelessly but extensively ornamented. She had a constant, broad smile on her face which gave place every now and then to loud laughter in response to minor amusing circumstances. Her eyes were bright and continually shifted from one thing to another. Her hands were in constant motion, gesticulating rapidly in accompaniment to her statements, every now and then darting out for various objects that were on the desk. Her facial expression was lively and in keeping with situations as they arose, even though in an exaggerated fashion. Her feet were constantly shifting on the floor as she sat in the chair, accompanying the inflections of her voice and her constant twisting about to look at everything in the room.

She offered a bright and hearty greeting to the examiner and without waiting for questions proceeded to greet the people in the audience. "You are all students, aren't you? What is that fraternity you belong to?" (This in reference to a fraternity pin rather prominently exhibited on the vest of one of the students.) "I cannot see it very well from here. My eyes are not quite so good now as they used to be. I have had some difficulty recently with my eyes. They have been putting all kinds of things into them. They are giving me a lot of medicine on the ward. Last night I had some pills to put me to sleep because I was so active." Her voice was hoarse and unnecessarily loud, and she kept on in her productions, jumping from one thing to another as it was suggested by her own statements or by changes that took place in the room. In reply to the question as to how she felt she opened up immediately with a torrent of statements, "I feel wonderful. Better than I ever felt in my life. I am riding the crest of a wave. Last night I felt as if I was in a boat jumping from wave to wave." Question: "Why are you in the hospital?" Answer: "I suppose I am mentally sick. I was in another hospital before, in Mt. Pleasant. That was after my first baby was born. I talked a lot. I wanted to do things. My people sent me down there. They sent me down here too. They got tired of me. Maybe they don't like me." The patient began to cry and while doing so continued to look around. Her eyes stopped on a negro student in the class. "Where do you come from? Down south? I didn't know there were so many colored people in this University. Wherever I go I see them. There were some colored

people in my town. Some of them lived near our place." She happened to look out through the window: "It is a beautiful day, isn't it, today? The trees are just beginning to turn green. Isn't it wonderful outside?" The tempo with which she produced all these statements was quick, her change from elation to tearfulness very rapid, but she did not stay on any subject for any length of time. In her attempt to express as much as she possibly could in the shortest period of time she did not complete her sentences. Words that happened to come out in connection with some of her productions quite frequently caused the cropping up of new statements, and when she was asked to continue with a consistent statement about any given content she would start off well but in her distractibility did not answer any question completely. She always ended up somewhere away from the original goal and every now and then caught herself doing so and was amused.

We see in the behavior of this individual a series of features, some of which characterize certain special forms of activity and others which are characteristic of all of them. We see first of all that whatever problems may be on her own mind, her chief flow of activity is associated with things outside of these problems. Even when they are called to her attention and she is asked to make an effort to concentrate on them, some minor occurrence, superficially associated with what she starts to say, claims her attention, and she is immediately off on that tangent. All of the activities, whether they are those of reception, intellection, or expression, are mainly conditioned by what happens outside of her inner experiences rather than by them. Furthermore, the tempo of all the activities seems to be increased, even though, because of that, they are necessarily superficial and do not go very deeply into the situation. She perceives quickly changes in her environment as well as in herself, digests them in a rapid fashion without stopping to analyze any of them, and immediately expresses her responses to these stimuli without any great effort at concentration. Her contact with new occurrences is at its highest. No consideration within her mind, no impressions received at any time can keep her for any great length of time from forming new contacts and new associations. All of these processes remain on a super-

ficial, shifting level, and as a consequence of that, the manner in which she deals with each is necessarily shallow. With that, however, they are appropriate. Thus her emotional expressions, although not of a lasting nature, and of an exaggerated degree, are logically related to the occurrences that condition them.

CASE II. A young man 20 years of age who was brought into the hospital because for a number of months he had been showing a gradually increasing lack of interest in things, had left the work he was doing, and spent most of his time sitting around in the house, apparently engrossed in his own thoughts. Occasionally he showed outbursts of violent temper without any apparent cause. His presentation to the class was rendered difficult first of all because he would not come in to meet the students. He actually had to be guided into the room by two nurses. Left at the entrance, he stood there in a stiff, awkward, angular posture, his eyes drooping and his head held stiffly. He was conducted to a chair and asked to sit down, but he continued erect until gently pushed into the seat. He offered no greeting to the audience and did not even look at them, continuing to stare at his own feet. To the greeting offered by the examiner he mumbled something under his breath and remained silent. His facial expression all through the interview remained stolid with a sort of wooden character to it. When he did speak there was no change of his facial expression, his hands remained on his knees, the tips of his fingers held stiffly, and his whole body remained motionless. The expression of the face, whether in response to discussions of his difficulties or of indifferent matters, remained practically the same. Occasionally a silly grin broke through the surface without any relation to anything particularly amusing in his environment. Asked how he felt, he answered, "Oh, so so." Question: "Do you feel happy?" Answer: "Not particularly." Q. "Do you feel sad?" A. "Not particularly." Q. "What would you like to do?" A. No response. Q. "Why did you come to the hospital?" A. "I was brought here." Q. "Who brought you?" A. "My brother." Q. "Why did he bring you here?" A. "First come best." Q. "What does that mean?" A. "The first is best." No further elucidation is given on this response. When told to go he still remained in his chair. He had to be helped by the nurse to rise from his chair, turned around in a stiff fashion without looking at anyone, and walked out of the room.

In this case then we see a complete contrast in behavior to the one discussed before. Very little attempt seemed to be made by the patient to receive impressions from a new situation. Just how much of the situation he actually appreciated was hard to tell from this interview. Subsequent interviews, especially with the aid of certain agents that help to break down the barrier established between the individual and his environment, substantiated the fact that the patient actually did perceive a great deal more than was evident from his activities. But even so a great deal of what was happening seemed to be lost, if only because of the physical factor of his not looking at things. This, however, should not lead us to the erroneous conclusion that a person of this type is not capable of being very much alive to some situations. Certain inflections in the examiner's voice, certain reactions of the students to the patient and the picture he showed, seemed to have been picked up with a remarkable degree of alertness. The digestion of the material received was apparently poor, but nevertheless a number of things were very actively elaborated upon within the patient, as was also noted in a later interview with him. His expression to the outside was unique. His movements were slow and stiff, but the patient, when he did talk, responded with a quick, jerky statement which seemed to be altogether out of keeping with what was asked. As to the reactions characteristic of all his activities, we can say that on the whole he was more absorbed with things going on within him, as was evident from the inadequate and surprising statements he made and which were subsequently learned to have been related to very serious problems in his own mind, rather than to anything that actually took place at the moment he was being interviewed. His activities seemed to have been slowed up in all fields, his contact was poor, and his efficiency in dealing with things considerably lowered.

Disturbances in General Behavior

In discussing the pathological manifestations in the form of phenomena that are common to all types of behavior we

necessarily restrict the field very materially to certain fundamental features. Considering the behavior of the person as the central point upon which our attention is focused, we will discuss these phenomena in their relationship to the behaving organism itself. With this in mind we can group these manifestations under three headings: the direction of these activities, the quantity, and the quality.

In discussing the different degrees and intensities of these disturbances it will be noticed that we start out with those pathological phenomena which are still so near to normal that at times they cannot be clearly differentiated from it. From there we proceed towards a discussion of the more serious disturbances until we reach the extreme in the form of the most abnormal features. This system of presentation may at first glance appear not to be in keeping with our objective of the presentation of psychopathology. To be consistent in such a presentation one would have to consider these expressions of pathological adjustment as entities in themselves regardless of their relationship to normal adjustment. However, as those of us who are interested in psychopathology do not have first-hand personal information as to the meaning of pathological adjustment and are primarily dependent upon its contrast with normal adjustment for our understanding of some of the important features in it, it is easier for us to understand these phenomena partly in terms of their being an exaggeration of normal behavior and partly in terms of their having rudimentary representatives in normal behavior. Because of this it was felt that, in starting out with pathological behavior that is fairly near to normal, we can attempt to gain an understanding of the more serious pathological phenomena by a gradual step-like consideration of the different degrees of these phenomena.

Disturbances in Direction

With the organism forming the central point in our observation of behavior as a continuous exchange of activities, we will consider first of all the direction in which these activities

move.* Since we usually think of the situation as divisible into two parts, the organism and its environment, we can think of the direction as having two alternatives: a) towards the organism itself, and b) towards the outside. As we observe the normal individual in his adjustments to a situation we find that the direction of his activities is fairly well distributed between these two components. Every now and then some very important occurrence outside may cause a predominance of direction outward, but when the importance of this occurrence wears off or something equally important occurs within the individual, the direction is turned back to the person himself. Thus there is a constant shifting of direction, with the normal individual usually dividing his attention equally between the two. As we begin to move away from the average form of normal behavior and approach the pathological, we find that this direction may tend predominantly towards the outside or towards the inside, and on that basis we can consider the pathological manifestations of direction under these two headings:

(a) *Outward*. Here we think first of all of the type of person who is easily affected by changes in his environment, and reacts to them readily. He is prone to laugh heartily at the mildest joke or just as easily to become tearful at some minor occurrence that impresses him as being sad. He mixes well, easily throwing off previous attachments and fitting himself to new surroundings. He is of the "hail-fellow-well-met" type, who shows good resonance with the outside, the tone of his own mental activities reacting very easily to the prevailing tone in the outside. This person does not necessarily have to be entirely dependent upon the outside in that striking changes within his inner world may deflect the direction and turn it on to himself. In general, however, the preponderance of his activities is towards the outside.

As we move further towards the periphery and approaching

* The word "direction" is used here in the same sense as when we speak of directing our attention or interests, and not in the sense attached to it in physics as, for instance, the direction of an electrical current or of a stream of water. In the sense it is used here, it does not necessarily imply any active polarization, but simply refers to the activities of the individual as they are observed.

the pathological fields we find the individuals who sacrifice or ignore subjective tendencies in favor of outside activities: the so-called "joiner," the "busybody," the person who is constantly tuned up to react to things that are going on outside him. He becomes easily enthused and optimistic over some enterprise that is presented to him, but just as easily loses interest in this when a new venture comes to his attention or when some trifling criticism from the outside turns him away from the interest in what he is doing. Such a person may be chronically vacillating from marked exhilarations on the basis of minor approvals from the outside to pronounced gloominess because of some criticism. He is very much like a butterfly that moves from flower to flower, not taking time to settle on any particular object because some new attraction has come into its field of vision. A further exaggeration is found in the person who is constantly meddling in other people's affairs, interfering with things that go on around him, advising people, constantly seeking their advice, easily taking up prevailing fads and dropping them just as easily.

All these manifestations, usually described under the term *extraversion*, are quite frequently found in persons who are still within the limits of normal behavior, although they may also occur as part of psychopathological reactions. With the more distinctly pathological forms of this phenomenon we find that the attention of the individual becomes so easily deflected by changes in the situation, that he may be rendered totally incapable of maintaining a consistent interest in any given subject. In the first case presented in the beginning of this section (v. p. 55) we have a very good example of this type of activity. The person is actually so incapable of keeping her interests focused on anything that she cannot make a consecutive series of steps in the recounting of an experience. The isolated facts that come up in the patient's narrative suggest new possibilities, and she turns toward them, forgetting entirely the original goal. New stimuli again will take the person away from that direction into a third one, and in the most pronounced forms of this disturbance we finally come to a type of behavior that consists of a hopeless muddle of reactions inter-

connected by superficial associations, but having no other single trend in its background, outside of the fact that most of the activities are determined by incidental changes in the situation. With that a new feature enters in, that of an increase of activities conditioned by the pronounced exaggeration of the tendency of picking up new occurrences. This, however, will be discussed in relation to the quantitative changes in behavior.

(b) *Inward*. As a contrast to the phenomena described above we have the opposite tendency of a predominance of direction inward. Here, too, we find the first indications of such a predominance in persons who, although not average, can still be considered within normal limits: the reserved, shy individual who seems to be cold towards the outside and does not appear to be particularly affected by anything that goes on around him. This person is usually a poor mixer. In a group, he is found to be withdrawn and reserved. He may realize that he cannot break through his reserve but he does not seem to be able to do anything about it. Persons of this type prefer to work by themselves, and in their enterprises tend to stay in one type of activity and not to be affected by the attitude of the outside world toward them. In their planning and speculations they are autistic, wrapped up in themselves, in their own thought processes, desires and interests. Whether of the passive type who spends his time weaving his dreams within himself without any attempt to bring about their realization, or of the active type who, like Napoleon, become builders of empires, their interests are predominantly directed toward themselves.

Within certain limits they may still be able to react positively to very pronounced changes in the outside, occasionally crawling out of their own shells to adjust themselves to these changes. But as we proceed towards the periphery of the normal and begin to cross into the pathological, we find less and less of desire as well as ability to react even to important occurrences. We come to the shut-in, seclusive type of individual who prefers to brood over his difficulties even though a frank statement of them to some outsider would help to alleviate them. Superficially such a person appears calm and unruffled

even though under the surface he may be very sensitive to criticism or approval. This, however, is not always the case because in some instances there really seems to be no definite reaction to such occurrences outside. Such a person may be said to be out of resonance with the outside. His attentions are mainly turned onto himself, and the different degrees of such a direction are usually described under the term of "introversion."

As this becomes more exaggerated we find that the person becomes more completely cut off from the outside even to the extent of refusing to respond to direct attempts to get into contact with him. If he does respond, his responses are brief and dry. The very manner in which he expresses himself shows his lack of interest in the outside. His sentences are constructed and interconnected in a peculiar disjointed fashion, mainly because the person does not take into consideration the existence of the outside and does not take the time to put in the necessary finishing touches that make speech intelligible to others. A more or less extreme example of such activity is found in the second case quoted above (v. p. 58). The queer statements that he makes are probably in some way related to the outside, but this is not indicated by the way in which they are expressed. This introversion of interests may go to even further extremes, examples of which are found in the clinical picture of "catatonic schizophrenia." There the person remains altogether unmoved, as far as one can observe, by outside stimuli. He does not answer questions, does not obey commands. If left alone, he will not feed or dress himself or look after his needs. If his arm is placed in a certain position, he will leave it there until it drops from sheer exhaustion. In hospitals for the mentally sick we sometimes find these people standing, sitting, or lying in certain postures, apparently having severed all connections with the outside and showing no reactions to, or interests in it. Here, too, we find that with the increase of this tendency there may be a concomitant decrease in quantity of the activities of the person, at least inasmuch as they can be observed by the outsider.

It must be appreciated in the attempt to understand both of

these forms of abnormal activity that the description is given in this form for the purpose of showing the gradual deviations from normal towards the abnormal. It does not mean that each person necessarily goes through all the stages and degrees of intensity that have been described. In some cases we may deal with persons who, all through life, show some of these characteristics without any pronounced changes either toward the normal or the abnormal. In certain types of mental diseases, however, there is a gradual development from the milder to the more extreme deviations. The persons suffering from what is clinically described as manic depressive psychosis, may, in their normal intervals between attacks of the disease, show a certain amount of deviation towards the outward direction which, however, still fits into normal behavior. With the development of the attack they may show a gradual increase of the direction outward and in a step-like progress reach the most extreme form of this deviation. Similarly with the deviation inward where a person before the development of the disease may represent minor deflections from the normal, but as the disease develops turn further into himself until he may finally reach a state of extreme introversion.

Disturbances in the Quantity of Activities

The normal person does not always present the same quantity of activities. At different times and because of certain changes within either himself or the outside these activities may become increased or diminished in quantity. In the average individual, however, there is a certain amount of equilibrium wherein the quantity varies only within certain limits and usually tends to compensate for periods of increased activities by more or less equivalent decreases. As we begin to deal with exceptions to the average which are still within normal limits we find persons who tend to show a predominance of either increased or decreased activity throughout their behavior.

(a) *Exaggeration in quantity.* Here we find first of all the type of person who seems to be "always on the go," the so-called "live wire," or "man of action." In such a person all

the activities seem to be increased as compared with the average. He sees more, registers more, does more than the average. This increase may be consistent along certain lines, and then we have the person who actually accomplishes more. More frequently, however, this goes hand in hand with an extraverted type of personality which in its increase of activities also becomes less effectual in any one of them. Such a person is represented in the nomad who is constantly on the move from place to place without being able to settle down and achieve the constructive life that must be built up slowly and consistently. Where this increased activity goes with an open, frank attitude and a more or less optimistic emotional state we have the person designated as *vivacious*. Where the restlessness and increased activity are associated with a certain amount of tension, fear, or anxiety we have the *agitated* state.

Going over into the more distinctly pathological, we encounter states of excitement where, because of something that has happened within the person or more often because of some changes in the outside, the person reacts in an exaggerated manner with marked explosions of activity. This state of excitement may come on in sudden storms of brief duration or may go on for a longer period of time. It may be directly related to changes in the outside wherein his responses are adequate but exaggerated, or it may come in the nature of blind fury dependent upon stimuli emanating from within. The degrees of excitement may vary from the less marked constant activity of the extremely extraverted type to the constant pronounced exaggeration of activity which finally leads toward complete collapse out of sheer exhaustion. The excitement may run along with a fairly clear grasp of the situation, the appreciation of what is going on outside being decreased only ~~by~~ by virtue of the greater reception of stimuli, or it may proceed in the form of a consistently increased activity without any reference to what is going on outside, or without any evidence that the person appreciates what is happening. In the more marked forms of this type of excitement we deal with *delirium* where the activity is very markedly increased but where the

grasp of what is happening is very much decreased or has altogether disappeared.

(b) *Diminution in quantity*. Here we deal with those persons who show a predominantly decreased amount of activities in all fields. They are the slow, deliberate types of individuals. Their reception of new occurrences in the outside is less alert, they take a longer time in thinking over and digesting the stimuli received, and this is also true of their response to the outside. They may at times be stirred up by some special occurrence into a more active state in which they can shift more easily from one content to another and be made to put out a greater number of actual accomplishments. In general, however, they drop back fairly easily to the slower tempo. Various incidental features are included with this. Decisions are difficult to make. In responding to a question, the different possibilities will be debated before they can make the necessary answer, and in coming to the appreciation of what is happening about them they will remain suspended in a state of inactivity for a long time, allowing the matter to seep into their minds.

As the sum total of activities is more slowed up and as we approach the pathological form of this change we find a more pronounced decrease in speed in all fields, which is termed *retardation*. The mechanisms that condition retardation may be of different types, but to the observing individual the most important point is that there is a general slowing-up in all activities in the field of behavior. As it increases in intensity this retardation may lead to a pronounced or even complete suspension of activities for a given length of time. When a question is asked, the patient will remain immobile without showing any signs of having heard the question. Gradually his face may light up with a gleam of understanding, and then he may go into another period during which he will digest the meaning of the content received and decide what will be the best form of answer. This answer will be given usually in a low tone, the words coming out slowly, in a deliberate fashion and with the use of as few words as possible. This renders the speech shorter and at times less understandable than usual.

Finally this may be exaggerated into a complete suspension of activities, as the time that is taken to discharge these activities is so long that the person is completely blocked in attempting to answer.

In some cases this may be, paradoxically, associated with a tendency towards an increase of some activities, the suspension developing out of the presentation to the mind of the person of a tremendous number of possibilities that neutralize each other and do not permit any one of them to take effect. Where the preponderance is towards the direction inward the person may in the more pronounced cases be so completely taken up by considerations of problems within himself that it will interfere with his readiness to deal with newly occurring conditions. In any of these cases where a complete suspension of such activities takes place we may have the development of what is designated as *stupor*. Here the person remains suspended in a state of inactivity, unable or unwilling to react to new circumstances. In these cases the pictures are closely related to the more pronounced expressions of inversions of activities into the individual himself, as they were discussed under deviations in "direction inward."

The conditions found in relationship to this phenomenon may also differ depending upon certain additional factors that are brought into play. Thus we encounter the states known as *drowsiness* or *sleepiness* where one feels that the main decrease in activities is in the field of reception. In further exaggerations of this phenomenon we meet with states known as *torpor*, and finally, in some cases, apparently no stimuli are being received and consequently we have no indications of intellectual functioning, and, certainly, no response. Where this state is complete we speak of *coma*. In some cases the retardation may be associated with certain forms of increased activity wherein the person, although unable to perceive or react to changes in his environment, still carries on a certain amount of activity dependent upon stimuli which we cannot evaluate. These states are particularly found in the so-called *twilight* states, in the *occupational delirium*, or in *convulsive* conditions. Sleep and its various abnormal phenomena such as those of *petit mal*,

narcolepsy, etc., can be regarded as closely related to this phenomenon, but they will be discussed in a special chapter.

Disturbances in Quality

In addition to psychopathological disturbances in the direction of the flow of activities and in their quantity we find a series of phenomena that express disturbances in the quality of these activities. These phenomena can be dealt with under two headings, that is, disturbances of form and disturbances of content.

(a) *Form*. In the behavior of the average normal person the various activities usually follow, within certain limits, a distinct, conventional form. We speak of the behavior of an individual, for instance, as being more or less systematic, clear, intelligible, and so on. This does not necessarily have to be in any way related to the ultimate efficiency of these activities in the form of results, or to their intensity, but simply refers to the smoothness with which these activities in general fit into what is expected of them in normal life. Psychopathologically we find deviations in both directions; that is to say, in the direction of disregard of generally accepted form or in the exaggeration of this form even at the expense of the content.

Here we meet with the first indications of such deviations in normal, if not average, behavior. In the direction of the accentuation of form we find first of all the over-systematic, pedantic, very careful type of person who pays a great deal of attention to the manner in which his activities are carried out, at times with a sort of natural flow and ease and without actually attempting to do so, at other times with a constant undercurrent of worry and fear lest he may forget some of the details of conventional form. As this tendency approaches the periphery of normal and passes into pathological behavior we find this overemphasis of form becoming more eccentric and queer. The person against his own will finds himself forced to deliberate over each act he performs, carrying out a number of ceremonials in a sort of compulsive or obsessive fashion, such as in walking, for instance, stepping out in a certain

fashion, and counting his steps; in going to bed, arranging his bedclothes in a certain way, etc. In extreme cases this tendency becomes so pronounced that it overshadows every other consideration, and the person finds himself incapable of paying any attention to the actual meaning or content of his activities in favor of the particular form they assume. Such behavior then becomes superficial, empty, and may lead the person into a very serious interference with his adjustment.

On the other hand, we have the careless, slipshod, and unsystematic type of person. He may, as long as this does not assume extreme proportions, be able to carry his activities to successful accomplishment, but even so it is done in a way that disregards system and causes his activities and their results to become peculiar. As we approach the more pathological forms of this deviation we find the gradual increase of this lack of system. The activities of the individual are represented in a jumbled-up, bizarre number of steps without any distinct relationship or control. Different trends crisscross in their purpose and interfere with one another. The person forgets what he started out to do, leaves things unfinished, or starts in the middle of things. His personal appearance as well as the appearance of acts that he undertakes become untidy and devoid of any form. And here also we come in the extreme cases to serious interferences with adjustment. Further possibilities along these lines include such contrasts as the finicky and fussy on the one hand and the careless and haphazard on the other, the awkward and clumsy contrasted to the meticulous, etc.

(b) *Disturbances in content.* In the center of the sum total of activities in the behavior of an individual we have the purpose or goal with which these activities are undertaken. In the normal individual we have a definite relationship of all activities to a certain purpose which they are to serve. This, however, must be of a certain degree if we are to be assured of normal adjustment. An over-accentuation of this goal on the one hand, or losing sight of it on the other, will result in a pathological adjustment. As an example of the first, but one which is still found in normal behavior, we have the cold, calculating,

despotic type of individual who rides roughshod over any incidental occurrences that are not in his own mind definitely related to the goal for which he is aiming. A Torquemado who believes that any means are justified by the end, or the fanatically religious person, who in his aim to behave according to the dictates of his religion, forgets all other considerations, are suitable examples of this type. As we approach the more pathological forms of this deviation we find people who are imbued with a single idea, some kind of mission for which they feel they have been chosen, and who do not consider that anything which is not related to that is of importance. The faddists, cranks, and litigious querulants show this form of behavior. The person who has been dealt with unjustly, or thinks that he has been, may in this fashion give up his work, his career, his interests in everything outside of this one tendency of proving his point. Depending upon the intensity with which this goal is pursued and the actual value of it, we then come to the different forms of paranoiacs, who in pursuance of some deluded idea arrange all their activities around their attempt to achieve it.

As opposed to this we have the person who has very little regard for any purpose. His activities are undertaken on the spur of the moment, and his goals are constantly changing either because of distractibility by outside factors from what, originally, was a fairly distinct goal, or because of the actual lack of purpose in his life. We have an example of this form of behavior in the first case presented in the last chapter where the person's activities, instead of being arranged around a central goal which is pursued, flies off along tangents that present themselves at each moment of her progress. The activities of such a person become necessarily inefficient, unsystematic, at times unintelligible, and their intensity is decreased.

Within a given situation the activities of a person, whether or not they have a definite goal and whatever their form may be, have to take into primary consideration their acceptability by that milieu in which he is existing. This ability to appreciate the demands of such a milieu and to try to adjust to it regard-

less of what its purpose may be, can be summed up under the term of *contact* with the environment. In the normal person we find that although a certain amount of sacrifice is necessary to adjust himself to the demands of the environment, nevertheless this attempt has its limitation in the form of a certain assertiveness of the person's own interests even if, at times, they come into clash with the environment. In psychopathological behavior we meet with deviations in both directions. On the one hand we find the rude, sarcastic, spiteful type of individual who delights in combating his environment regardless of whether it will increase or decrease his ability to adjust normally. As this proceeds to further extremes we begin to find behavior that is calculated to hurt the environment and bring the person into clash with it. Here we meet with the well-known, eternal non-conformist, the argumentative type of person who will always argue against a point simply because it was brought up by someone else, the self-assertive, self-confident, arrogant person, the cynic or the caricaturist. Further we come to the anti-social, revolutionary character whose main purpose in life seems to be to break down existing customs and forms, the professional iconoclast, the over-zealous critic. In keeping with the increasing tendency to clash with the environment, and decreasing consideration of actual purpose, we come to the mentally diseased person who *resists* everything that comes to him from the environment and the *negativistic* person who shuts himself up within himself and not only resists influences from the environment but actually responds with the opposite of what is demanded. When such a person is asked to open his eyes he will close them even more tightly, to raise his arm he will stiffen it out in the lowered position, to stand up he will sit down, and vice versa.

Contrasted with this is the surrender of the individual's own desires to the authority of the outside. Still within normal people we find the soft-spoken, over-polite person who, in contradistinction to what he wants to do and what he is actually justified in doing, remains docile in his fear of hurting people's feelings. Further we find the submissive, shy, and

timid individual, the person who is always seeking the approval and the assurance of the outside regardless of how clear-cut his purpose and activities may be, then the *anaklitic* or "clinging vine" type of person who is always dependent on someone else because of lack of self-confidence. Then we have the gullible and trusting type of person showing different degrees of suggestibility. In such a person the whole behavior may be dependent upon what the outside influences dictate to him. In their more serious forms such deviations may reach a point where all subjective purpose and goal is lost, and no matter what is suggested by the outside it is carried out, sometimes even without the knowledge of the person as to the source of this activity.

In a further set of qualitative disturbances we deal with the *intensity* of the activities. In the normal person the intensity, of course, varies with the circumstances within certain limits. At no time, however, should this intensity overshadow the all-important fundamental principle of adjustment. In psychopathological phenomena we find the possibilities of both an increase and a decrease of the intensity. Along the direction of increase we may have the thoroughgoing, "go-getter" type of person who sees and acts in a very intense form, immersing himself in one special phase of a subject without looking to the left or right and where the very activities themselves become more important than the consideration of the goal ahead. On the other hand, we have the easy-going, shallow type of person who quits easily and takes on new activities just as promptly, whose activities may become so superficial that they are actually nothing but a foam without anything underneath. The behavior of such a person becomes empty and purposeless even though on the surface it may appear well-systematized and related to a certain possible goal.

Finally we deal with the *efficiency* or result of these activities. This is usually, though not necessarily, dependent upon the other characteristics of behavior. In some cases, however, we find that with all of the phases remaining normal the person is not able to get results. We think, for instance, of the

shiftless and the flighty, the nomad who is driven from one thing to another without being able, or for that matter even desiring, to accomplish anything.

In the consideration of all these features that are characteristic of the general behavior of an individual we must remember that we are dealing in phenomenology primarily with these features as phenomena. As such we observe them at the particular moment when we are placed face to face with the "behaving" person. In some cases it is true that any one of these characteristics may be consistently present throughout the life of the individual. In our discussion of determinants and mechanisms of psychopathological phenomena we will come to see that in some cases these features seem to be constitutional characteristics of the particular person and are peculiar to him throughout his life. Under such conditions, these peculiarities are quite constant, and when they are of a degree which seriously interferes with the adjustment of these individuals but do not seem to have been acquired some time during the process of the development of the individual, we designate them as *psychopathies*. In other cases, however, these phenomena may be fleeting in character, present at one time but absent at another. Furthermore, we may even have certain individuals who at one time represent one deviation from the normal and at another time a diametrically opposed deviation in the same characteristic. This factor should be borne in mind when we come to evaluate the sum total of phenomena observed in the abnormal person and their relationship to other phenomena as well as to the whole personality.

Chapter V

THE PSYCHOPATHOLOGY OF RECEPTION

WE WILL now approach the consideration of psychopathological phenomena in the special fields of behavior, and in accordance with the outline in the introduction to this part we shall first discuss the psychopathological phenomena that can be observed in the field of reception. The behavior component of reception consists in those objectively observable phenomena which the individual manifests in relation to his reception of stimuli received from the given situation. In this field in particular it is difficult to differentiate clearly between subjective and objective phenomena. In general it would seem that whether or not a person receives any impressions from a given situation would depend upon what he tells us of the occurrences within him in response to a certain stimulus. Actually, however, we have certain direct expressions in the behavior of the individual which allow, with a fair degree of certainty, an objective appreciation of this reception. We deal here particularly with four components of this branch of behavior.

Receptivity

By this we mean the general readiness of a person to receive stimuli from the situation. The human being, just as any other organism, has as a fundamental quality peculiar to all protoplasmic substance, the characteristic of "irritability," that is to say, the ability to perceive changes within itself or the outside. In normal persons this irritability varies within certain limits. Depending upon circumstances, the person may be less or more sensitive to such changes, and these changes will have to be of a certain strength in order to be actually per-

ceived. This does not necessarily include a response to these stimuli. A stimulus may be appreciated without a response becoming either necessary or desirable. Even under normal conditions certain circumstances may produce a generalized increase or decrease of receptivity. Under fatigue, for instance, receptivity is usually decreased and in order to be perceived by the individual the stimuli will have to be of greater intensity than under usual conditions. In the normal individual, however, these limits are fairly well defined and are more or less common to most average human beings. In psychopathology we may meet with greater or lesser degrees of increase or decrease in receptivity.

In the direction of increase we find the type of person who is designated as alert or alive to things that occur within himself or in his surroundings. Slight changes in the environment or in himself that could remain without effect in the average individual produce an appreciable change in this type of person. As we progress further toward the field of pathology we meet with the characteristic designated as *irritability*, in this case, however, not the normal function of protoplasm but an abnormal increase of readiness for the reception of stimuli. Such persons may be incapable of carrying out consistent activities because every little noise or change in the light effects or temperature around them will irritate them. They are constantly at the mercy of such minor distractions. With the increase of this irritability we find the more extreme type of increase in receptivity designated as *excitability*. Minor changes in the situation which would probably not even be registered by the normal person, not only are appreciated by these persons but actually excite them and leave them in a state of tension even after they have ceased to act upon them.

As contrasted with this we find the decrease in receptivity. Here we deal primarily with the characteristic designated as *dullness*. The threshold of irritability to all or certain types of stimuli is increased, and it requires a stimulus of greater strength to produce an effect upon the individual. These are the persons that are considered phlegmatic, difficult to arouse, and who remain indifferent to stimuli which in normal people

would create a definite effect. In the more extreme forms of disturbed receptivity we deal with *lethargy* in which the irritability is further decreased. Then in a gradual exaggeration of this tendency we have such conditions as *sopor*, *torpor*, and finally *coma* where no stimuli are capable of producing an appreciable effect. In a way these features may appear as more generalized in that with a decrease or increase of receptivity one will necessarily suffer a parallel change in total behavior. The main source of the change, however, remains within the field of reception.

Attention

In approaching this component of reception we first of all encounter the difficulty that has crept into psychological thinking by virtue of the different manners in which this term is applied. Different observers differ in their definition of attention, depending upon what phase of it they may have in mind. In a great many instances in describing the phenomenon of attention people confuse it with those factors which determine it, in others with its resultant effects. In the present chapter we wish to deal with attention purely from the point of view of its being a phenomenon in the field of reception regardless of what its cause may be or what it may ultimately mean to the individual. As such, it may be defined, in close relationship to the concept advanced by Bleuler,¹⁴ as follows:

Attention is the process of placing a certain portion of stimuli in a given situation in the foreground and the shifting of the rest of all available stimuli into the background. Bleuler furthermore considers this process as having a certain number of components, each one of which may be pathologically disturbed and thus change the whole aspect of attention. These components may be described as follows: (a) The *tenacity* with which a person adheres to a certain given set of stimuli. (b) The *vigilance* or readiness to receive new stimuli. (c) The *scope* of attention as measured by the amount of surface that is covered. (d) The *direction* depending upon whether the attention is given more to the person's inner experiences or to the outside world.

It is possible to have increases or decreases in any one or more of these with or without accompanying changes in the others. Thus, we may have an increased tenacity such as occurs in a scientist who is particularly immersed in a special subject that he is investigating. He is influenced almost exclusively by the particular set of stimuli in the situation, and with that necessarily has a decreased scope with a decreased vigilance for stimuli outside of the particular focus. The stimuli within that focus claim an increased vigilance. We commonly speak of that as "absentmindedness." The professor who, when immersed in a discussion of his theory, walks down to dinner dressed in his pajamas and bathrobe is a typical example of this form of disturbance. The interest does not, of course, have to be something that is of universally accepted value. When it is we regard the person as eccentric. If this interest, however, is in some delusional idea, we may then have the bizarre behavior of a mentally diseased person. Next we deal with an increased vigilance that is accompanied by, or for that matter even caused by, a decreased tenacity. The student, for instance, who is forced to listen to a lecture, the main trend of which he is not capable of following, has difficulty in keeping his attention on the subject discussed and is the victim of influences of minor stimuli from the outside. This again in pathological cases may be the result not of being less interested in the subject at hand but of being incapable of shutting out the effects of extraneous stimuli. Such an increased vigilance with a decreased tenacity could be seen in the case presented in the opening remarks on this section (v. p. 55).

In some forms of mental disease we may have certain specific changes in attention. For instance, a person who is the victim of a delusion that people are persecuting him, laughing at him, and talking about him may have an increased tenacity in the form of sticking to certain impressions which he has received or believes he has received at one time, and at the same time have an increased vigilance for certain special occurrences outside of him that further tend to prove that people are actually paying undue attention to him. Where the vigilance is increased and the tenacity is decreased pathological

cases also show an increased scope in that the number of stimuli received from the outside is very great by virtue of the fact that none of them remains with him for any length of time. In the field of direction of attention we may have an increase of direction towards the outside as in the case just mentioned or, on the other hand, an increased attention inward, which is seen especially in introspective persons who spend most of their time watching for the appearance of certain sensations in their own bodies or for digging deeply into certain experiences within themselves, analyzing and re-analyzing them.

Sensation

It is probably best to start the discussion of this sector of reception by defining it. From the point of view of observable behavior, sensation can be defined as the act of reception of a stimulus by the sensory apparatus. On the face of it, this cannot be considered as a psychological concept, but must be looked upon as a physiological one. The nature of this change in terms of actual psychological values is primarily appreciated through the means of perception which naturally belongs to the experiences of the individual rather than to his behavior. However, there are certain activities which the individual undergoes and which, fundamentally, can be regarded as belonging to the field of expression but which serve to give us an objective, even if indirect appreciation of sensation.* Thus, when a person is shown two colors, a blue and a red, and in answer to our question as to what he sees he tells us that he sees blue and green, we have two results. We know then that whatever it is that we experience under the concept of "redness" is experienced by this person under the concept of "greenness." This is purely subjective and, therefore, belongs to the field of experience. However, when he consistently makes the same mistake in naming the color we also have an indirect objective indication that rays of a certain dimension which should call forth the sensation of redness produce in this per-

* Further discussion of this distinction will be found in the chapter dealing with Awareness (v. p. 86).

son the sensation that green rays usually cause. In this sense we have the objective appreciation of the behavior component of sensation. Sensations from this point of view may show disturbances of a quantitative or of a qualitative type.

(a) *Quantitative disturbances*. In these we may have abnormally increased or decreased effects of the stimuli that produce the sensation. Usually these are designated by the Greek or Latin term which stands for that particular field of sensation with the prefix *Hyper* for an increase, *Hypo* for a decrease, and *A*, or *An* for a total absence. Thus in the sensation of pain, which is termed *Algesia*, we may have *hyperalgesia* or an increased sensation of pain, *hypalgesia* or a decreased sensation of pain, and *analgesia* which is absence of the sensation of pain. *Aesthesia* with its derivatives *hyperaesthesia*, *hypoesthesia*, and *anaesthesia* are usually applied to the sensation of touch. *Pallaesthesia* and the derivatives *hyperpallaesthesia*, *hypopallaesthesia*, and *apallaesthesia* are applied to the function of vibratory sensation. *Osmia* with its derivatives *hyperosmia*, *hyposmia*, and *anosmia* are applied to the sense of smell. In the common terminology we usually refer to the dysfunctions of the higher senses, that is to say sight and hearing, or to taste, with the terms of increased acuity, decreased acuity, or absence of effects of these sensations. In addition to this there are the more complicated aspects of sensation. These have to do with distance, shape, and size of objects. These, however, belong more properly in the discussion of the appreciation of spatial and temporal receptions.

(b) *Qualitative*. In addition to the simpler quantitative changes that were enumerated above we may have qualitative deviations in the functions of the sensory organs. Thus an odor may not only appear as more or less intense than it really is, but it may produce a sensation of an altogether different odor. For instance, the odor of coffee may produce the sensation of tobacco, etc. In the different terms applied to qualitative disturbances of this type we utilize the same names but with the prefix *Par*. Thus we have *paraesthesia*, *paralgesia*, *parosmia*, and so on. In these qualitative changes we may deal not only with a disturbance within the same sensory organ but

referred sensations to other organs. Thus, an auditory stimulus may produce a visual sensation (audition colorée), etc. This confusion of the placement of sensations into the proper sense organ is sometimes referred to as *synaesthesia* in which there may be a double or even triple form of sensation produced by the stimulation of one sense organ.

Space and Time

The reception of the time and space characteristics of a given stimulus is in itself a very complicated process and one that is not definitely understood. Just what it is that gives the person the ability to judge space, direction, shape, or the passage of time are questions of psychological, physiological, or philosophical import that do not need to be discussed here. We do know, however, that in certain pathological conditions this ability of correct reception of these relationships is disturbed, and these disturbances belong partly in the field of reception. In both the fields of time and space we may have quantitative as well as qualitative changes.

(a) *Space: Quantitative disturbances.* Under certain conditions we may have a simple increase or decrease in size or distance of contents perceived. One patient, for instance, complained that at certain times in his disease-process, all the people looked larger than he knew they ought to be, at other times they looked smaller. Under the effects of certain drugs, accompanying the development of other psychopathological conditions, we find that the distance of objects from the patient is rendered larger or smaller in such a way that in attempting to reach them the person actually intended to take more steps than he really should. With eyes closed such a person would bump into that object if the distance was judged as greater than the real or stop short some distance away from the object if it was judged as less. This is sometimes referred to as *dysmetria*. Of several objects apparently objectively equal in size some may be judged as smaller or larger than the others, and so on. In the field of visual sensation where these changes are particularly common we refer to them as *micropsia* where

the person sees the objects as smaller than they are or *macropsia* where they appear larger.

Qualitative. Here we find the disturbances related to the reception of spatial qualities. In certain disturbances of function we find, for instance, the shape of objects distorted. This is referred to as *astereognosis*. When the person closes his eyes and a watch is placed in his hand he may say that he has a box of matches, and so on. The relationships may be distorted in such a way that all contents outside are placed in a peculiar spatial relationship. Von Weizsaecker ¹¹³ reports a case where all perpendicular objects were perceived as inclined at a certain angle. Tridimensional objects may be perceived as flat and vice versa. Under certain conditions special types of space qualities cannot be perceived, such as, in some cases, angles, which are perceived instead as curves.

(b) *Time.* Here we may also find quantitative and qualitative disturbances. It is important to remember that time relationships may be received in different ways. Bouman and Grunbaum ¹⁵ recognize three forms of time appreciation, i.e., 1) chronometry, 2) chronology, 3) chronognosis. The disturbances may occur in relation to any one of these forms:

(1) *Chronometry* is the ability to perceive time by the use of a certain standard such as a watch, the movements and position of the sun or stars, etc., as well as through the application of these standards from memory. A disturbance in this function would be of a quantitative nature. Thus when the patient judges a period of time as being that of five minutes, whereas in reality it measured fifteen minutes, we have a chronometric disturbance.

(2) *Chronology* is the appreciation of time by comparing the occurrence of two or more events. A person usually determines the occurrence of certain things in his life by judging their relationship to some important historical dates. Thus, one will say that a certain thing occurred at the time when one lived in a certain town, but as he lived in that town during the year of 1925, the other event must have occurred at that time. Under certain pathological conditions we may have a mixing up of events and the consideration of two unrelated

events as having occurred at the same period of time. This, too, is a quantitative disturbance.

(3) *Chronognosis* is the actual appreciation of the passage of time within the individual himself, apparently unrelated to anything that may have occurred at that or any other time. This form of time appreciation offers a series of possible qualitative changes really belonging more to the field of experience, and our appreciation of such changes is largely dependent upon the communication of these experiences by the person himself. It will, therefore, be discussed in more detail in the section that deals with experience.

Chapter VI

INTELLECTION (A)

WE NOW turn to the discussion of disturbances in those functions, which are interposed between the reception of influences that come from the situation on the one hand and the responses to them in the form of observable expression on the other. They deal primarily with the appreciation by the individual of the relationship of the particular influences in question to the whole situation or to the person himself and the manner in which they are to be handled. Running their course within the individual they will, of course, present a very large subjective element which really belongs to the field of experience rather than that of behavior. Certain aspects of these processes, however, can be appreciated objectively, and their nature and course can be measured according to certain standards. These aspects of the whole group of activities referred to we propose to discuss under the heading of "intellection."

In choosing the term "intellect" to designate these phenomena we are aware of the fact that it presents certain difficulties. There are few terms in psychology or psychopathology that have been applied to such a variety of concepts and functions as that of intellect or intelligence. This seems to be particularly unfortunate because in clinical psychology, especially, these functions are of the very few for which elaborate systems of measurement have been devised. The reason for the variety of interpretations and applications of this term again depends upon the confusion of points of view with which different students in this subject approach the problem. In some cases we find that the authors in their discussion of intellect pay most of their attention to the underlying mech-

anisms of the phenomena with which they are dealing. When we attempt to do that we find that there are very few functions in the whole mental apparatus of the individual that are not in some way or other related to such functions as memory, thought, judgment, and so on, all of which should be included under the term "intellect." In other cases we find that the authors confuse the observable and measurable objective evidences of the functions of the intellect with those concomitant experiences in the instinctive and emotional life of the individual that take place at the same time. There is no doubt but that these are closely related to the functions that can be objectively appreciated and very frequently, if not always, play an important role in determining the results of the intellectual process. But if we are to deal with all the phenomena in human life with any form of systematic precision, we must be able to differentiate, even if only arbitrarily, between what is observable and measurable and what can only be obtained through the introspection of the person. Furthermore, we must attempt to differentiate between a phenomenon and its mechanisms or causes. It is from this point of view that in the present work we wish to limit the phenomena referred to as belonging to intellection to those that represent the person's *objectively appreciable evaluations of relationships*.

The next problem in the discussion of these phenomena is encountered when we attempt to separate them on the one hand from the preceding phenomena of reception and, on the other, from the succeeding phenomena of expression. Any act of human behavior must be regarded as an entity not only conceptually but also chronologically. Just where, during the process of the act, the receptive activities cease and the digestion of the material begins is, of course, impossible to tell. In the same manner the decision to respond in a certain way, although it belongs theoretically to the intellectual appreciation of relationships, includes in it certain of the components of the expression itself. It is thus, for instance, that some of the features discussed in the last chapter could just as easily have been considered under the functions of the intellect. This is particularly true of the closing paragraphs that deal with time

and space appreciation, for both reception and determination of relationships are inseparably connected in this function. It is because of this that we will start our discussion of the appreciation of relationships in close connection to the concepts discussed there.

Consciousness

The objective evidences of the person's reception of stimuli from a given situation are usually associated in our minds with a knowledge on the part of the person that this stimulation has taken place; in other words, that the person is *aware* of the action of these stimuli. In fact, in most cases it is difficult, if not impossible, to tell whether a stimulus has affected the individual unless this individual is conscious of it and can impart this conscious knowledge to us. This is not always the case, however. From experiences in everyday life we know that when we are immersed in some special work which claims most of our attention, our field of consciousness is restricted, and certain occurrences outside of us, which can be shown later to have had a definite effect upon us, do not reach our awareness at that particular time. Just what happens to the effects of these stimuli, whether they are stored up in some system outside of consciousness and later because of some changes in us or around us permeate our consciousness, is a question that we would like to defer for future discussion when we take up the problem of structures of the personality. Here it is sufficient to say that we can find good evidence to show that the function of consciousness varies in its scope from time to time in different persons and that these variations do not necessarily affect the reception of stimuli as such. Thus we find, for instance, that a person in a state of unconsciousness may in reaction to a pin prick withdraw the organ injured, showing that a definite response has occurred to a given stimulus, but we cannot say that the person was aware of having been subjected to such a stimulus. The state of awareness may show deviations from the normal in both quantitative and qualitative directions.

Quantitatively we may have restrictions of the field of consciousness to certain limited sectors in a given situation de-

pending upon a concentration of the person's interest upon them. We have already referred to occurrences of this type in normal persons. The scientist, immersed in the study of a certain subject, and very much alive to the minutest changes in the situation inasmuch as they are related to that particular subject, if he finds that he must leave his laboratory and go to some adjoining building to discuss this subject with some of his colleagues, will, with his mind centered upon this particular task, get up from his chair, go to the hat-rack, take his hat, put it on his head, and go through the series of steps necessary to take him into the other building. If asked to recount these steps in which he followed certain stimuli not associated with the particular object that he had in mind, he will not be able to give an account of these performances. To say that these acts were automatic, instinctive, or subconsciously motivated is only giving them other names. Actually we are dealing here with a series of activities, including reception as well as response, which have occurred without the person's awareness of their existence.

In psychopathological material we find innumerable examples of this type of activity. In certain cases, especially those designated in psychiatry under the term "schizophrenia," we find a great many acts of this type running parallel to a stream of consciousness which is actually directed and concentrated upon some special object in the mind of the individual. This restriction may go to extremes, in which the scope of the person's consciously illuminated behavior decreases to small dimensions, and in some cases seems to be altogether obliterated. This is particularly well seen in the cases of complete stupor in which we have all reasons to assume that the person receives stimuli and reacts to them and yet shows no sign of being conscious of them. With that we have other quantitative disturbances in which there is that which we might call an absolute decrease of conscious activity and not simply a concentration of the field of consciousness into one particular sector. These are usually designated as different degrees of dimming or clouding of consciousness. They occur most frequently in those psychopathological conditions that

are conditioned by organic disease of the central nervous system. The phenomena discussed under the terms of sopor, lethargy, drowsiness, coma, and others may very well be considered from this point of view. It is difficult to determine in such cases how much of the condition is due to an actual decrease of irritability, and therefore a failure, partial or total, to receive these influences, and how much may be due to a dimming of the state of awareness.

In some cases, although not quite so many or so pronounced, we may deal with an *increase* in the function of consciousness. Even normally, we find that some people can include in their field of consciousness a richer variety of contents than others. The phenomenal ability attributed to Cæsar of being able at the same time to read one letter, write a second, dictate a third, and listen to the reading of a fourth, would belong to such an increase. Even if this particular extraordinary increase of the scope of consciousness may be only mythical in character, we do encounter persons who are capable of being aware of, or alert to the occurrence of a large number of factors in the situation. The stock exchange brokers, keyed to a high pitch of efficiency by some extraordinary occurrence in the market, may carry on conversations and dealings over several telephones at such a rapid rate that they will appear to occur almost simultaneously. In psychopathological conditions we find occurrences of this type especially well-illustrated in certain types of "manic" excitements. The rapid stream of incoming impressions that are taken up with phenomenal speed are not only digested, even if in a superficial manner, and responded to, but the person can actually recount these in subsequent interviews. It is true that, all things being equal, the spreading of the scope of consciousness over a large surface necessarily reduces its depth, and, from a psychopathological point of view, this is to be regarded as abnormal.

Cause and Effect, Orientation

Closely related to this function of awareness as well as to the subsequent steps of the evaluation of relationships are the

phenomena of the appreciation of causality and orientation. Human beings, inseparably linked as they are to the categories of time and space, have the instinctive need of determining in case of any content the where, when, and why of that content. An "occurrence" in a situation, in which the person finds himself, is by the very nature of its definition the effect of one set of circumstances and the cause of others. It takes place at a certain time in the existence of the individual and has its spacial relationships to other contents around it. It is true that in most cases an analysis of a situation shows that this appreciation of the causal relationships of contents and their fitting into the proper time and place, seem to follow a logical reasoning which really belongs to the field of the appreciation of relationships. Nevertheless, the mechanisms of these functions seem to be so fundamentally related to human nature that at times one wonders whether a certain rudiment of the appreciation of causality in one's orientation does not exist by itself and precedes the more deliberate evaluation of relationships. As it is, we find disturbances in these functions in certain types of normal individuals as well as in psychopathological cases.

The disturbances may take place in relation either to the depth or the quality of these functions. Instead of the necessity of clear appreciation of the cause and effects of certain contents, for instance, one may be satisfied by rather superficial relationships. The "post hoc, ergo propter hoc" method of reasoning is a fairly common one. We find it especially clearly shown psychopathologically in those cases that are constitutionally mentally deficient or who have suffered a depreciating process. Explanations undertaken by the patient for himself or given by him to outsiders for certain activities or occurrences, their causes, and possible effects, are given in a superficial, shallow fashion which to the normal individual appear quite inadequate. This is not a case of faulty appreciation of causality, but of being satisfied with apparent rather than actual connections. Children, at a certain stage of their development, may show this lack of the appreciation of causality.

Qualitatively we find disturbances in this field that have to do with a faulty though elaborate appreciation of causality. The determination of cause and effect by juxtaposition instead of the actual linking up of a chain of events is one example of this type of functioning. In some cases, especially in "schizophrenics," we find a certain perverse appreciation of causality in that things which could not in any possible way be connected are by their very impossibility related in that fashion.

Exaggerations in this function may be found in normal as well as abnormal persons in cases where the need for the establishment of causal relationships of everything that comes into the field of the person's appreciation takes on more or less extreme dimensions and runs its course in a compulsive fashion. The hair-splitting, fanatical perseverance in this function in some "psychasthenics" or "schizophrenics" is a well-known phenomenon in psychopathology. The person becomes engrossed in this particular function and is unable to pay any attention to the determination of other relationships, constantly finding new occurrences around him, the causes of which he cannot see but for which he is continually searching. The skeptics in philosophy who become fanatical in their search for the origin of things, the first cause, and numerous other metaphysical ideas, are representatives of this type of function within the limits of normal.

Orientation. The discussion of the "time and space appreciation" was started in the last chapter. With the incoming of a newly received content there seems to accompany it an appreciation of its temporal and spatial relationships. Within the individual this function is further pursued, and with that there is also an attempt to appreciate the time and space relationships of the individual himself to all other contents in the situation. This may be designated as the function of *orientation*.

The disturbances in this field may be of different degrees and types. First we deal with a *limitation* in capacity, in which the person may be oriented approximately but not exactly. Thus the date of the month, the day of the week or the year may be given somewhere near the actual one but not exactly

so. Thursday may be designated as Wednesday, the 24th of May may be designated as the 23rd or 22nd, the year especially at its beginning may be still given as the previous one, etc. These faults in orientation are to a certain extent fairly common in normal individuals, depending either upon a certain constitutional carelessness about such things or upon the concentration of the individual upon some special objects of interest and with a lack of attention to this function. Similarly, we find such difficulties in space in the forms of geographic mistakes, faults in direction and localization. As these become more exaggerated they go over into the field of the abnormal where mistakes of a more unusual nature take place. The month in the middle of the summer may be given as January, the year of 1933 may be given as 1850, the city in which the person lives may be wrongly designated as some place many miles away, and so on. This fault in orientation may also extend to more specific factors. Thus a person may be well-oriented in regard to most contents but show a remarkable inability to place a certain special occurrence. The most marked disturbances in orientation are found in cases of organic disease of the central nervous system where the mistakes made are particularly bizarre.

In some cases we find the occurrence of phenomena wherein the need for orientation and the actual ability to orient oneself is carried to extremes, quantitatively and qualitatively. There are persons, for instance, who when asked for the time of day will give it not only in terms of hours or fractions of hours but in terms of minutes and seconds. This happens also in cases of spatial orientation. These are often found among normal individuals with certain eccentric traits. They are also found in certain forms of psychopathological reactions wherein the person is tied down to this particular function in an obsessive or compulsive fashion. Contrasted with this is a certain slipshod attitude toward orientation, which in some cases may be purposeful. Such persons may deliberately qualify all their answers in relation to orientation with such phrases as: About such and such a date, perhaps it happened then, etc.

Thought

The behavior component of the thought processes may be defined as the objectively available evidences of the conscious appreciation of relationships and their arrangements according to logical categories. This, of course, does not exhaust all the manifestations of thought processes nor does it even pretend to touch upon those functions that must be regarded as the groundwork of the thought process and as responsible for the development of it. The entrance of received material into the field of consciousness serves as the starting point of a process which has to do with the arrangement of all this material within the individual, the appreciation of the relationships of this material both of its different components to one another and the relationship of the whole to the personality. This leads to the function of understanding or insight into the situation. Then we have the process whereby conclusions are reached in regard to how one is to deal with this material, that is to say, the function of judgment, and finally if by the process of judgment we reach the conclusion that a certain type of behavior is called for, a decision is rendered in favor of a certain particular form of activity, which leads us into the field of expression. Running parallel to the functions enumerated above we have the process of memory which has to do with the storing up of contents within the field of intellectual functions and rendering them available for future use.

(a) First, then, in the field of thought we deal with the disturbances that may occur in the process of the arrangement of the material and the appreciation of its interrelationships, in other words the *associative* functions. Here we find a rich variety of possible disturbances, some of which may be regarded as quantitative in type, others as qualitative. The objective evaluation by the observer of the nature of the associative processes is, of course, materially dependent upon some of the phenomena of expression. Just exactly what goes on within the mind of the person at a given time can only be learned through the responses given by the patient in the form of speech, gesture, movement, writing, etc. Here, of course, we

are not altogether dependent upon the good will and co-operation of the person, because although some of the sources of information must be obtained directly from the patient, others can be obtained by indirect means of observation such as the results of these processes in the form of mannerisms or gestures of which the patient himself may not be conscious. The most common source of information concerning these, however, lies in the expression in the form of language, either spoken or written.

In the normal individual the associative processes take place along certain lines, varying, of course, between rather broad but nevertheless definable limits. The material that is to be used in understanding, judgment, or memory is arranged as it falls into certain logical categories. Such conditions as causality, values, meaning, etc., serve in the orderly arrangement of this material. In the normal individual all this takes place with a certain degree of precision and regard to logic, a certain intensity and depth, and proceeds at a certain rate of speed. The number of possible associations aroused by a given content, that is to say its being related to other contents either within the situation or within the previous experiences of the individual, follows also certain definable limits within the normal groups. All of these may be altered in cases of psychopathological material, the disturbances being as follows:

Quantitative disturbances. Here we deal first with the rate of speed with which this function proceeds. Even within the limits of normal we find certain persons in whom these associative processes occur at a much faster rate than usual. They are very closely related to the phenomena described under the chapter on "disturbances in behavior in general." This type of person in addition to being alert to new occurrences is also quick to grasp relationships. A joke is appreciated quickly, the point of it is grasped in a flash, the person immediately reminds himself of some related jokes which are just as quickly communicated to the outside. The various steps in a mathematical problem are grasped quickly, and the rate with which one passes from one step to another finally to reach the solution is much more rapid than in the average person. It is true

that very frequently this is accompanied by a certain shallowness of the associations. The problems that are solved quickly by such a person are those that do not present any unusual difficulties. Where such occur the problem may not be solved at all, simply because this type of person either associates quickly or cannot associate at all. This is not always true, of course. Occasionally, even if not frequently, one finds the combination of a high rate of speed accompanied by unusual depth of insight. These, however, are in the minority. In psychopathological material we meet with still further increases in the rate at which associations take place. The most typical cases representative of this phenomena are the "manic" excitements, a case of which was presented in the opening remarks on this section (v. p. 55). There we saw a quick grasp of meanings even though all of them remained on a superficial level. This increase in the rate of speed may proceed, as for instance in the above-mentioned case, with a fairly intelligible relationship of the associations or it may occur with a bizarre and unintelligible relationship. This will be further discussed in consideration of the qualitative disturbances.

Contrasted with the above changes we may have a diminution in the rate of speed. The relationships existing between contents perceived and occurrences at the time, or such as have taken place on previous occasions, may be grasped very slowly and deliberately. Even within the limits of normal we find the persons who ponder a great deal over this function of association. A joke is at first received stolidly and digested slowly, until gradually its purport seems to penetrate the mind of the individual. Much to the chagrin of the person who tells the joke, the effect of it may be spoiled by the slow response in the form of appreciation. Similarly, problems that to the normal individual present no difficulties, and the essence of which can be readily grasped, are thought out here in a very slow fashion. In psychopathological material we find further increases of this slowness of the associative processes. A question asked produces at first no visible reaction in the individual, he thinks a long time over it, and the relationships which are necessary

- to condition a response are grasped in a very slow fashion.
- Where this slowing up is general in nature and affects, as far as one can see, all associative processes, one speaks of general *retardation*. Where it affects only special contents so that the person may answer certain indifferent questions in a normal fashion but will take a long time in responding to others, we speak of *blocking*. This slowing up of the associative processes, especially in psychopathological material, does not necessarily have to be accompanied by a better and more thorough form of thinking. In fact, it usually interferes with the appreciation of the relationships. Sometimes the speed of formation of associations becomes so retarded that the person actually has difficulty in remembering the original problem or content and may return after a while to ask what the question was.

Similar deviations in the direction of increase or decrease are found in the number of available associations. These may be abnormally increased as, for instance, they are in "manic" individuals. Contents associated sometimes in a most far-fetched fashion seep into the production of the individual to such an extent that they interfere with his reaching a proper goal. On the other hand, the number of available associations may be decreased, in which case we speak of a *poverty of associations*. This may be of a purely quantitative type where there really are fewer associations such as, for instance, is the case in persons of constitutional mental defectiveness or in deteriorating processes. On the other hand, it may be conditioned either by marked concentration on some special subject or by certain emotionally conditioned inhibitions along special lines.

Qualitative disturbances. Here we deal first of all with the depth of the appreciated relationships. As we mentioned above in describing the phenomena of increased rate of the speed of associations, the very fact that these associations occur at a higher rate of speed and with an increased scope of associations renders their depth rather shallow. Examples of this type of disturbance, although seen in a moderate fashion in certain unusual normal persons, are particularly well seen in cases of

manic excitement. As an example we might present the following excerpt from the verbatim report of the spontaneous productions of a manic woman.

When the observer whose given name was Ina May came into the room where the patient was placed the latter started off in the following fashion: "You said Ina May, Iney, piney, diney, diner, is there anything finer? (She begins to sing.) Diner, Diner, is there anything finer than my Dinah gal? (Patient's voice is hoarse from continuous talking, and in singing a high note her voice breaks.) You know I lost my voice. Isn't that terrible? My beautiful voice. You know I thought I told them I slept in a stable and I woke up a horse. They said I was a little horse, but I am not a little hoarse, you know. There was Little One Eye, and every time she opened her mouth, jewels came out. Every time she opened her mouth beautiful jewels came out. And Little Two Eye, every time she opened her mouth beautiful flowers came out. And Little Three Eye, when she talked toads came out. I didn't think there were toads, but there are. My mother says there are tree toads. (The patient was in a pack and was perspiring profusely.) Oh, I'm so damned hot all the time. Just keep it cool, yes, cool. (That in connection with the nurse applying a cold sponge to her forehead.) That is what my mother used to say, keep cool, and it was true, because what mothers say always comes true. Am I a mother? Am I a mother? See my abdomen? See those stripes? Well, those marks came from carrying my baby. Does that prove that I have a baby? I haven't seen that baby since the 29th of September, and it is now the 17th of October. (A doctor comes into the room.) There he is, one of the most beautiful men on earth. Could you see me do some of my contortionist's acts?" (This in accompaniment to her attempts to wriggle out of the pack.) In this way and talking at a very high rate of speed and as loud as her voice permitted her. she went on until the interview was over.

In this case, then, we see a typical example of both an increased rate of associations as well as a decreased depth. The connections are formed not with any regard to really vital relationships but to such superficial connections as the sound of words (*klang* associations) or because some new stimulus happened to come into the field. Whether or not it has any reference to the situation is of no importance, but as it affects

the patient at that particular time, the flow of the arrangement of the material rushes off along that direction, to be taken up again by some new stimulus, etc. We see here, however, an intelligible and usually quite transparent connection between these factors even though it may be a superficial one. In other cases, however, where there may also be an increase, even if not as pronounced, of the rate of speed, one is at a loss to see the relationships between the different parts of the spontaneous production. This will be further discussed when we come to the consideration of the inadequacy and bizarreness of associations. The shallowness and superficiality of associations do not necessarily have to take place in relationship to an increased rate of speed. It may occur with a normal or even slow rate of speed in cases where there is an intellectual defect produced either by some degenerative disease or by a constitutional mental defect. The following examples illustrate this form of association.

The patient was a deteriorated epileptic. He was given a series of proverbs and asked what the meaning of these was. His answers were as follows: (1) Proverb: You can't touch pitch without being tarred. Answer: "You can't touch pitch without being tarred. I remember where I first saw that. I believe my sister had a book that had that in. You can't touch pitch without being tarred, but I can't remember where that was now. Very true, an old saying, but I remember that one day she was talking to my brother Harry in regard to something. Oh, I remember. He had some trouble in a ball game, and she said, 'Harry, you know you can't touch pitch without being tarred. You know those boys are not in your class, so don't get into an argument with them.' That is how I remember the things." (2) Proverb: Deeds are males and words are females. Answer: "Males are rough and will do things that the females will not do. Deeds are males and words are females. That I don't understand what they mean by that. You could use this in a good many different ways as far as that is concerned. No, just as I say, you can use that in a good many ways, but just exactly what is its use I don't know. I don't know hardly how I can do that to be honest with you. The phrases that I would have to use according to how this is written here, I don't know how to make them up. I absolutely don't. A person with a good college education

could undoubtedly analyze that in good shape. Deeds are males. It is according to what the deed is whether it is male or not as far as my education and the same with females. It is according to what the deed is whether it is female or not." He goes on in this way at great length, always remaining on the surface and not seeing the true relationship of the proverb and failing in the grasp, with apologetic statements but without coming any nearer to the solution.

We see in this case a similar superficial form of associations, but here the rendition was made slowly, and apparently there really was no ability to appreciate the relationships, this not being dependent upon interferences from outside sources. Another feature that was seen in this case, and which is particularly apt to occur in the epileptic, was the monotonous repetition of the same inane statements in a tone of voice that was not marked by difference in inflections, and an apparent compensation for the inability to solve the problem in the form of a very apologetic attitude. In some cases of organic deterioration, such as alcoholic or general paretic, we find another form of superficiality in which the ineffectualness of the associations is covered up by a façade of good will and a carefree attitude.

The following is an excerpt of an interview with a patient who was a deteriorated general paretic. He started out by complaining that he was not being treated well in his room, and at the same time stating in a childish fashion that he had superior powers and was very rich. He claimed that if the attendant did not accede to his demands he would "turn the heat on him." Question: "How could you do that?" Answer: "Well, I will send a telegram. I will write a telegram and send it to a fellow outside. He takes it to a fellow at the state house, and he sent one back and said if he didn't take me out of here in five minutes they would turn the heat on and melt the door. I had a gun but he took the gun away from me. The telegram said for him to come in and take my gun away from me and take me out of here in five minutes or they would turn the heat on and melt the door and burn them up. He came in and said they said for him to take my gun away from me and let me out."

In all of these examples it could be noticed that even if the relationships are superficial and shallow, and in some cases represent a certain naïveté and childishness, they nevertheless on the whole remain fairly intelligible as long as one can also observe the various factors in the situation. There are, however, certain qualitative types of disturbances which are more bizarre and less intelligible in nature. These are particularly to be found in cases of schizophrenia.

The following is an excerpt from the productions of a schizophrenic woman who was, according to her statement, engaged in writing a book on religion. She was discussing the relationships between differences in religion and differences in languages. To the question, what is the difference between languages, she answered: "Well, not the Greek was the first language, but the Pig-Greek known as Pig-Latin. Catholic religion was originated to counteract or contrary to the first religion of God known as the Latin language. Then God invented the Jewish Latin to outsmart Satan. Sir Walter Scott, originator of King of England known as King Tut, took up the plan because of love of David and originated the first English nationality. The Queen of Spain, Maria-Maria, then invented the Spanish language. Prince of Orange, son of Sir William and Joan of Arc, created the Scottish and French-English. The Indians were derived from the French and Spanish, thus being the children of nature. The Japans who hate the Frenchmen in their brains, originated a nationality by signs of snakes, and then Greece still being a little bit smarter mixed the Jewish and the snake Greece, thus being one of the hardest languages to understand, for they are the seed of Caanon. Benjamin's children, negroes, being the most tender-hearted but desiring to be the cleanest, clung to the simple sign language of Jesus Christ as their only hope of salvation as they were the originality of the cross of commendation of Neckial." The patient goes on in this manner talking rather rapidly and spontaneously on this subject.

We see in this example a form of associations that on the whole, certainly to superficial analysis, defies any attempt at understanding of relationships. In some cases one seems to see indications of superficial connections either conditioned by faulty memories of Biblical passages or because of slight con-

nections between names based on geographical or historical proximities. On the whole, however, that free and easy flow of the manic associations and their indications of the person's alert contact with everything that goes on about him is missing here. Similarly we miss the naïve, childlike transparency of story-telling that we find in the organic case. The relationships here if present must be conditioned in lower depths of the personality structures. Consciously, at any rate, the patient does not give any indications of them, and in a great many cases it is not possible to get at them even by further efforts.

In the more advanced cases of the "schizophrenic" process we find further developments which were already indicated in the above passage. They deal with the special structure of the single associations and their interconnections with one another. In addition to the bizarreness of the relationships there is also a certain jumping from one thing to another in which there are no considerations given to clauses or explanatory use of conjunctions and prepositions. With that there also occurs another factor of interjecting words which either have no meaning in the particular way they are used or are altogether newly coined words known as *neologisms*. A more detailed discussion of this will be taken up in the discussion of speech and language disturbances, but to show further the lack of connection between associations with the use of such words we might quote the following interchange of questions and answers.

The patient was a case of schizophrenia of long standing. Question: "How many fingers have you got?" Answer: "Fourteen." Q. "How many fingers on both hands?" A. "I know what it is to be a good Democrat. I had a good Republican. I also know how it is to keep in the scrapes." Q. "How is it?" A. "Good money, lucky, soft, stant words." Q. "How old are you?" A. "Godinogious." Q. "How old are you?" A. "How old? Sulva." Q. "Are you married?" A. "Tranguided." Q. "What is your husband's name?" A. "One, two, three, and a five, six, seven." Q. "What are you counting?" A. "Six, seven, eight, nine, ten means I love you and you love me. Five, six, seven, eight, nine, I love you and I feel it."

In this way the associative processes go on until all connections disappear entirely and are replaced by a jumble of mean-

ingless words. Another form of qualitative disturbance in associations is found in certain cases of organic conditions where, accompanying the faulty appreciation of relationships, there is also an inability to get away from certain statements, phrases, or words. The patient may *perseverate*, that is, keep on repeating one single word or phrase or sentence in response to different questions regardless of how unrelated it is to them. The quality of stickiness that was noticed in the associations of the epileptic above, is also found in a number of other types of organic conditions. This is particularly common in some cases of post-encephalitic disturbances, where the person keeps on reverting to the same subject, which may in itself be a reasonable one, but which has no relationship to the interview or conversation at the time. If the person, for instance, has a special request which he has made to the physician, he will keep twisting and turning about during the interview, always coming back to the same request even if his getting back to that object has to be undertaken in a circuitous way.

The qualitative disturbances in associations do not necessarily have to be general. In some cases they may affect special parts of situations. Interesting examples of this type were found in some cases of early senile deterioration. In these cases there seems to be a separation of an isolated sector of thought content that is affected, whereas in other fields the disturbance is not noticeable.

One of these patients, a woman of 56, was brought to the hospital because during the last two years she had shown faulty judgment in carrying out certain activities especially related to spending money. Although she seemed to be well-adjusted in every other way and seemed to appreciate logically problems of different types, she kept on asking for sums of money from her son, and when this was obtained would go out and spend it unnecessarily. She could give no reason for this extravagance although otherwise she reasoned quite logically. When brought to the hospital she behaved in an orderly fashion, discussed matters of various sorts with a good grasp, but kept continuously attempting to escape from the ward in a sort of blind way, by standing near the door and every time the door opened trying to push past the person who entered. No

amount of explanation and reasoning could deflect her from this particular type of behavior. When asked why she did that, she responded that she wanted to get out. When asked whether she did not as yet appreciate the fact that she was unable to do so, she responded that this was not true. Asked how she could do it, she answered, "by walking out through the door when it is opened." Thus she kept on moving around in a circle and did not seem to be able to see through that particular impossibility.

(b) Disturbances in the appreciation of *symbolic relationships*. In the evaluation of relationships of the contents in a given situation the person is not always dependent upon the actual intrinsic qualities of these contents. It is true that in a certain sector of stimuli received the relationships are determined directly on the basis of the specific characteristics of the content. Thus the appreciation of pain through the actual contact with a hot object and the future association of the feeling of pain with the nearness of such an object, may be regarded as the manifestation of a direct and specific relationship. If, however, a person appreciates the fact that an object is hot, not on the basis of the actual warmth that emanates from it, but because of its color or shape, or because of a written or spoken warning, the determination of relationships is accomplished not through direct but indirect means. We speak of this form of appreciation as *symbolic*. The very word "hot," which in itself has no intrinsic characteristics of heat or pain, is to the English-speaking person symbolic of such sensations. This ability to determine relationships on the basis of symbols is a very important factor in our adjustment. In fact, by far the larger proportion of determinations takes place on the basis of symbolic rather than direct stimuli.

Just how this rich accumulation of symbolic knowledge is acquired, whether it is based purely upon the development of conditioned reflexes or has other sources, whether it is completely of ontogenetic nature or can also be acquired phylogenetically does not concern us here. Nor do we intend to take up, at this point, a discussion of the exact level in the personality at which these developments occur and how they are related to other contents in the human mind. At present it is

sufficient to appreciate that relationships can be determined on the basis of symbols and what the disturbances in this function may be. By far the most important of all the possible manifestations of symbolic appreciation is that of language, both spoken and written, and the number of possible disturbances here is very large. Until recent years it was thought that these disturbances may occur relatively independently and one spoke of *sensory aphasia* as representative of the inability to appreciate the symbolic significance of the spoken word and of *alexia* as representing a similar difficulty with reading. It was even felt that in the brain there were definite areas, discrete lesions of which could cause disturbances of this type. Within recent years, however, it has been learned that the situation is not quite so simple, and that the development of such disturbances is intimately related not only with speech and writing as "expressions" but with various other mental activities.

Among the various forms of disturbances that are observed here we find first of all those in which there is a relative increase or decrease of facility in acquiring the ability to understand spoken or written words. Once learned these functions may also differ in the relative ease with which the person grasps the meaning of words.

In cases where both the learning and the subsequent utilization of these functions are within normal limits, we may find disturbances occurring on the basis of some disease process of organic or psychogenic nature. In the ability to understand the meaning of spoken words we may have disturbances that affect all or most of the words themselves. In these cases the words seem to convey no meaning to the individual, even if at times he may be able to repeat the word when he hears it. In other cases where the words themselves are understood there may be a difficulty in grasping the meaning of a whole sentence or a paragraph. More or less similar types of disturbances are met with in connection with reading but here, of course, we may have a still more elementary interference with the appreciation of the symbolic significance of single letters or figures.

It is impossible here to go into all the possibilities presented by the different forms of symbolic appreciation. Theoretically

any one of the organs of reception can become the medium of symbolic influence. Thus we may have visual symbols (including not only reading but colors, light, shape, etc.), auditory (besides speech, we can have other sounds such as music), smell, taste, vibration and others. In all of these the stimuli may lose entirely or partially their symbolic significance even though they retain their specific meaning. Within recent years, numerous investigations have been carried out in this field and the reader is referred to the publications on such subjects as *asymbolia*, *agnosia*, *aphasia* and others, the more important of which will be found in the Bibliography (see references 35, 90, 97).

Chapter VII

INTELLECTION (B)

(c) Judgment

IN THE process of the evaluation of the material received from the situation following the arrangement of the material by means of the associative processes, we come now to the next step, that of judgment. By that we mean the proper evaluation of two or more contents in their relationship to one another, as well as to the situation as a whole, for the purpose of reaching a certain conclusion. The manner in which judgments are accomplished and the rules which one should logically follow in this process do not really belong to this field. For a proper understanding of this function we will refer the reader to text books on psychology or to those that deal with the subject of logic.^{17,20} It is, of course, advisable for a person who is interested in the different possibilities of disturbances of judgment to have a good appreciation of what judgment should be normally. It is only on that basis that we are able to detect the flaws which are quite frequently found even in the judgment of normal people, but are especially well-illustrated in that of abnormal persons. The psychopathological disturbances of judgment may be divided into (1) those in which the speed of the function is affected and (2) those where there is a change in quality.

(1) In the first we deal with manifestations very similar to those found in the other intellectual functions. Even in normal individuals we may find an unusual increase in the rate of speed with which conclusions are reached. We sometimes speak of them as "jumping to conclusions." Usually they are accompanied by certain superficialities, although as in the case of

associations we may find here, too, in rare cases the remarkable combination of speed and efficiency. In the more distinctly pathological conditions we find that with a speeding up of the associative processes, there also occurs a similar increased rapidity in reaching conclusions. This, of course, may reach the extreme limits which we find in the "manic" patient, where no attempt seems to be made to probe into the justifications of the conclusions and mere superficial relationships serve as acceptable reasons for reaching a conclusion.

Similarly, we find decreases in the rate of speed which may, but do not necessarily have to be accompanied by a similar decrease in associative processes. Where the first is the case, we find, as in retardation of the thought processes, a simple decrease in the speed with which the necessary reasoning is undertaken, and therefore a slowing up in the process of reaching a conclusion. Sometimes, however, other factors enter which will interfere with the speed of judgment in cases where the associative processes are not decreased or are even increased. We find this type of change in cases where the person, either because of lack of confidence or because of a special attitude to a particular problem, is actually afraid to reach a final conclusion because of the possibility of its being wrong. Before judgment is rendered, this person may experience various degrees of skepticism in regard to its justification and thus block in the process of reasoning.

(2) We next deal with the qualitative disturbances of judgment. As was mentioned above, there usually occurs with an increased rate of speed a concomitant shallowness or superficiality of the bases on which conclusion is reached. We find, for instance, in some manic cases a whole set of wrong beliefs formed on that basis. Patients of this type, while going on with their rapid form of association, may hear bells ringing and will in the usual way bring in this new stimulus into their thought processes. But in doing so they will associate the particular tone with the person of whom they were thinking, and the next time the bell rings they will begin to think of this person, and if something should happen to them at that time they may consider this particular person as in some way responsible for

that occurrence. As long as this is the case and there are not any more deeply seated reasons for such erroneous conclusions, the tenacity with which the person holds to the conclusion is not very marked, and we find that in such cases the person can be easily reasoned with and dissuaded from his belief. This is possibly one of the reasons for the fleeting nature of the delusions of this type of patient.

Shallowness of judgment, however, may also occur without increased speed. It is particularly true of patients with special disturbances in the intellectual fields, such as the congenitally feeble-minded or those where a deteriorating process has taken place. Here we find conclusions reached with the normal rate of speed or even a decreased rate, but, on the basis of superficial relationships, much like the types of conclusions that a child would reach. This naïve form of judgment may have as its basis different types of relationships. The mere proximity of certain contents may give an impression of relationship. The fact that two contents have been related in early life may be used as an indication that they are related now.

We may also find qualitative changes in the opposite direction. Before reaching a conclusion a person may have to undergo an elaborate train of argumentation, each one of the arguments likely to appear as insufficient because of the possibilities of new considerations. In such cases the speed, of course, suffers, and sometimes in certain pathological cases this sticking to details and doubts may interfere with reaching a final conclusion to such an extent that it brings the person to a standstill in his activities. All these qualitative changes may be and usually are not only accompanied but even conditioned by activities in other fields. From the point of view of behavior, however, these are the observations that we can make.

Aside from the simple deviations in the depth of judgment, we may have other inadequacies of a more intricate and less intelligible type. A person who is immersed in some special form of work, whose interests are concentrated on a certain aspect of the situation, may tend to mold all occurrences around him to fit into relationships with the particular subject of interest. In psychopathological cases we find, for instance, this

form of inadequacy in those cases that have their interests introverted and turned upon some special ideas within themselves. The sensitive person who feels that people are paying undue attention to him will interpret a smile on the face of a stranger as referring to him. He expects this to happen and reaches the conclusion that it actually does so. Since these meanings and evaluations go on in such a person within himself without permitting us to gain insight into these experiences, conclusions that to us appear quite bizarre may take place. One patient makes a statement that the townspeople are going to kill him. When asked what made him think so, he states that while he was walking along the street, "I looked up at the town clock and it showed the time as being ten minutes past eleven. I knew then that they were after me." It is, of course, possible that to reach that conclusion the person has undertaken a series of steps of intelligible if not adequate judgment. On the face of it, however, there seems to be no relationship at all. Since in a number of cases the conclusions reached seem to be based on judgment so bizarre that they admit of no possible explanation, we are at times forced into the assumption that possibly, at least in the consciousness of the person, he himself knows of no connections.

Related to this type of judgment, but occurring in normal as well as in abnormal persons and sometimes resulting in surprisingly adequate conclusions, are the so-called "intuitive" judgments. The person may speak of "hunches" and have no logical reasons for reaching the conclusion that he does, and we ourselves cannot see them. A surprising example of this type of phenomenon was noted in the following case.

The patient in question was a case of advanced schizophrenia, who had the delusion that she could read the thoughts of people around her. She claimed that the people always thought bad things about her concerning her sexual activities. She was sitting in a chair quietly facing another patient on the ward when she suddenly got up, walked over and struck the patient. When asked why she did it, she said that this patient thought that she (the first patient) was contemplating having relations with her husband. She could give no further reasons than her usual one that she could read

the other person's mind. When the patient who was struck was interviewed, she, who was a paranoid type of person, said that she actually was wondering about her husband and his being unfaithful to her, and on looking at the other patient, she thought that the husband might be interested in her sexually.

This type of disturbance may go on to further extremes wherein no possible reasons are attempted on the part of the patient and certainly are not apparent in his speech or activities. The productions of one of the patients described in the considerations of associations shows this unintelligible form of reasoning (v. p. 99).

The disturbances in judgment must also be considered from a point of view of what can be described as the absolute and relative components of judgment. The person who undertakes an elaborate series of reasoning steps for the sake of reaching a conclusion that he is being persecuted by a group of people, may do so with remarkable lucidity and adequacy as far as the secondary steps in his judgment are concerned. In these cases we find that, although the first premises, with which the person starts, are usually partially or totally wrong, he goes on with an unusual sequence of logical details in proving his point. Here we deal with the relative type of disturbance. In other cases, however, there is no attempt made to justify any of the steps and the whole thing is nothing but a series of inadequate judgments, and we deal then with an absolute disturbance in judgment.

(d) *Comprehension*

The associative processes as well as the reasoning undertaken should, in a given situation, be arranged in such a way as to comprehend or understand the whole situation before an act of response is to take place. From a certain point of view, of course, the comprehension of a situation must be regarded as inseparably related to the other functions. Fundamentally it, too, is based upon proper relationships and proper conclusions. Nevertheless we find in some cases disturbances in this particular field not necessarily associated with any of the others. A person may, for instance, be able to follow the relationships

between isolated factors in a given situation, may be able to reach conclusions when they have to do with a small sector of the material, and yet not be able to envisage the whole thing and understand its importance. Such disturbances may interfere only with the degree of comprehension. The mentally defective person may have difficulties in comprehending a situation because of the large scope of details involved, but given a simpler situation he may be able to deal with it quite well. This is also seen in cases of deteriorating disease processes, especially of an organic nature. Simple situations are grasped fairly well and their importance appreciated; more complicated situations not at all or inadequately. It is needless to say, of course, that we also find these varying degrees of comprehension in the field of normal persons.

There are, however, certain psychopathological cases wherein comprehension as such is disturbed. Within the limits of normal we find this particularly well-illustrated in the people who, although they are capable of dealing with details, no matter how numerous, provided there is someone else to look after the organization of the problem, are quite at a loss to understand the whole setting. In psychopathological material we find this disturbance exaggerated to a point where no appreciation of the whole situation is possible, regardless of how simple it may be. Each of the details may be grasped in its significance by itself, but interrelationships that condition the creation of the whole situation are entirely overlooked. It is a condition which is particularly well-illustrated in cases of senile deterioration but may also be found in other diseases.

The discussion of all these enumerated functions now lead us to the consideration of the actual decision to act on the basis of the steps undertaken above. Before we go into the discussion of this, we must discuss two other problems: first, memory; second, intelligence as a whole.

(e) *Memory*

Under the term memory we include the functions of the storing-up of material received and the appreciation of rela-

tionships evaluated at any given time throughout the phylogenetic and ontogenetic history of the individual, that are capable of being brought into the conscious mind of the individual at some future time. In discussing memory as a phenomenon of behavior we must stress this particular aspect of it as given in the definition. We must be fully aware of the fact that in the mechanisms as well as in the nature of memory there are other factors to be considered. Just what the reasons are why we should be able to "remember" at all, why certain things should be remembered and others not, and, finally, why certain memories can be brought into the field of consciousness easily and others with great difficulty, is a matter of vast interest but does not belong to this particular aspect of the subject. We also should bear in mind the fact that whatever theories may have been advanced for the purpose of showing these characteristics, none of them has so far given us the final answer to the problem. Whether we should regard memory and its functions and mechanisms on the basis of the psychoanalytic theory or on the basis of certain physico-chemical changes in the tissues of the brain does not at present concern us. Nor are we at the present moment concerned with a discussion of where the material is preserved, prior to its entrance into the field of consciousness. With these points in mind we will now consider the different types of disturbances of memory. Here, again, we may have disturbances of a quantitative as well as of a qualitative type.

(a) *Quantitative*. Still within normal limits we find variations in the number of contents that can be remembered as well as the ease with which they can be brought into consciousness. Examples of remarkable increase in memory are known among normal people. They may relate to all forms of material or only to certain types. A certain physician in the author's acquaintance had the remarkable ability of remembering numbers. Travelling in street-cars or railroad trains he would be able to recount clearly the numbers of the cars, the numbers on the caps of the conductors and motormen; walking down the street for some distance, he would be able to recount with remarkable ease the different license plate numbers of the cars that passed him. At

the same time, however, he had some difficulty in remembering details concerning his patients. There are certain people who show remarkable ability in remembering everything that comes into their field of perception, regardless of what the nature of these may be. In psychopathological material we meet with increased ability to remember things in both of these aspects. A "manic" patient who came into the hospital and spent half an hour making voluble remarks at random, concerning different articles on the desk or in the room, was at a future date capable of recounting clearly most of the things that he noticed and remarked upon at that time. People of a sensitive nature who are particularly concentrated on some special factor within themselves may be able to remember the minutest details that have anything at all to do with their particular subject of interest. This is, for instance, found in cases of "paranoid" individuals who will pick up and retain a tremendous number of details concerning their particular delusion.

These disturbances are still more numerous and serious in connection with the decrease of the function of memory. They are found in different fields of mental disease and may be of different nature and based on different causes. The most frequently occurring is that of the gradual decrease of the functions of memory that takes place with progressing age. Details in a given situation, names and places and other stimuli are altogether forgotten or only vaguely remembered. This disturbance in memory in these particular cases may only refer to details in the recent past when we speak of disturbances of *recent* or *retention* memory. In other cases it may occur in a similar fashion in relationship to details of past events, that is, disturbances of *past memory*. In some people we meet with difficulties in memorizing or learning details, and there we speak of disturbances in *rote* memory. When the occurrences in a special sector of the person's life are altogether obliterated, we speak of an *amnesia*. When this amnesia is caused by a certain incident in the life of the individual, and the material that is not remembered is restricted to some part of the person's life preceding the incident, we speak of *retrograde* amnesia.

Where the factors occurring during or after the special incident are forgotten, we speak of *anterograde* amnesia.

All amnesias are not necessarily permanent. By the aid of certain methods we may be able to help the person to regain the memory of the forgotten material either partly or totally. In such cases we have a cure of the amnesia. During the time, however, when the person is unable consciously to present these factors to himself or others then, regardless of whether they can be brought into consciousness or not, the condition must be regarded as an amnesia. We must, of course, keep in mind the fact that under usual circumstances the only way we can tell whether a person remembers or does not remember certain events depends upon what he tells us. In a large number of cases the person for one consideration or another may not want to admit that he remembers, and there we speak of pseudo-amnesia. In some cases, especially those of organic brain diseases, the amnesias developed are so complete and so resistive to all attempts of cure that we must regard them as an absolute loss of the material as far as conscious memory is concerned. Even here, however, cases exist in which some or all of the material has eventually been brought back into the conscious mind of the individual after a certain period of time.

(b) *Qualitative*. In the field of disturbances of memory we may deal with certain qualitative changes that are referred to as *paramnesias*. Different types of such disturbances may exist. The person who forgets the name of an individual may for some reason or another apply another name to that individual and persist in associating that name with that particular individual. He will remember the person and certain details concerning him, but always attach that name regardless of how many times he is corrected. Similarly, the events that have occurred at a certain time may be forgotten and replaced by others which the person insists have occurred at that time. These phenomena which occur particularly in connection with retention memory difficulties are often referred to as *pseudo-reminiscences*. It must be carried in mind, of course, that where the person for some reason wants to convey the idea of having an amnesia, he may

willingly and consciously bring in the occurrences of other events to cover that period of time. An effort must be made to differentiate between this phenomenon and that of actual pseudo-reminiscences.

(f) *Intelligence*

In the field of clinical psychology the term intelligence has become firmly rooted in its application to certain functions in mental activity and an elaborate system of testing of intelligence has been established. The original contributions of Binet and Simon as well as their followers in that field, such as Terman, Porteus, Stern, Wells, Healy, and others, have gradually evolved into a well-known system of intelligence testing. With the undoubtedly great contributions that these efforts have brought, they have also introduced a large number of misunderstandings and misapplications in this field. As Spearman⁹⁸ has so clearly shown, one of the most important reasons for the misunderstanding that has crept into this field is the fact that the tests which have to do with a very definite sector of mental life have been applied in the interpretation of others to which they do not apply. It would be well to remember that the term intelligence should be applied primarily to the field of those functions that in this section have been considered under the general term of intellect; in other words, that by intelligence we mean primarily that function which deals with the determination of relationships within the field of consciousness. There is no question but that a number of other functions and phenomena are largely responsible for the adequacy with which intelligence functions. Emotional disturbances, for instance, faults in the reception of stimuli, difficulties in the expression of responses and others will contribute largely to decreasing the abilities to determine relationships. It is because of this that an uncertainty has crept into the value of these tests in determining the actual ability of a person to respond adequately to a given situation. The old dictum that "the wish is father to the thought" is true here as well as in the general study of human nature. We understand much more quickly a situation

that we wish to understand, and opposed to this persons with undoubtedly high intelligence may have the greatest difficulty in seeing through a situation because seeing the facts as they are may be unpleasant. All these considerations should be remembered when we apply intelligence tests. Within their limits, however, they are quite reliable in judging the capabilities of a person in that field.

A description of the various methods and systems of mental measurements is outside of the limits of this book. For information concerning them the student is referred to the excellent texts on the different phases of clinical psychology.^{11, 89, 109} The tests devised may deal with single aspects of certain functions within intelligence, such as memory or different phases of it, judgment, associations, orientation, etc.; or they may include two or more of these functions, as is the case in the more complicated tests. The systems devised take a certain type of individual as standard. In the prevalent systems used in this country, the intellectual functions of a sixteen-year-old, average school pupil are taken as the standard of normal. Below that, the tests are graded in terms of years down to infancy. Above that, one deals with the abilities of persons above the average. The results are given in terms of Intelligence Quotient (I. Q.) graded above and below 100. The I. Q. of the normal person varies between the limits of 90 to 105. Below that we deal with degrees of intelligence that are termed as follows: 80-89 is considered subnormal, 70-79 is borderline, 50-69 is moron, 25-49 is imbecile and 0-24 is idiot.

The determination on the basis of these tests must also take into account the fact that in cases of intelligence below the normal, we may deal with two distinct types: (1) that of the congenitally feeble-minded person whose lack of intelligence is due either to a faulty original endowment or to some disease process that has occurred in early infancy; and (2) the deteriorated person whose intelligence has been reduced from a previously high level by the agency of some deteriorating mental disease. There are certain indications that can be used in differentiating between these two types of low intelligence. The most important of these are as follows: first, in the case of the

originally mentally defective person we will obtain the information that the patient has always shown a faulty intelligence, whereas in the person who has deteriorated we will find a history of accomplishments and activities before the onset of the disease that indicate a normal intelligence at that time. Second, the original mental defective will carry out the tests that are considered to be normal for his particular level, failing only in a few of the tests below his mental age and performing few of the tests above his mental age. In the deteriorated person, the deterioration may be patchy and therefore he may perform some tests in the higher years at the same time that he fails in tests below his mental age. This phenomenon is referred to as *scattering*. Where this scattering occurs over a four- or five-year period, we begin to suspect the possibility of deterioration. One of the most reliable tests in this connection is that of vocabulary. The deteriorated person who averages a very low level in his tests may have a vocabulary of a normal or even superior adult. The mentally defective person will very rarely have a vocabulary higher than his level. The work on this differentiation is still in process and other tests are coming to light as aids in this differentiation.

(g) *Decision*

The various functions referred to above under the inclusive term of intellect deal with the appreciation of the material received in terms of the relationships that exist between the different contents in the situation, and the conclusions that are reached on the basis of this appreciation of relationships as well as the comprehension of the whole thing. It is largely on the basis of these functions that the response in terms of expression is undertaken. The mere insight into the situation, however, and the conclusions of what the adequate response would be are in themselves not necessarily responsible for the actual performance. For this, the person has to reach a *decision* to act. Just how much such a decision is dependent exclusively upon the previously discussed functions remains a question. On the one hand we see decisions to act arising in the form of

compulsions, where the person is incapable of giving any reasons for acting as he does, simply stating that "something" has forced him to do so, either some unaccountable impulse within himself, or that he was coerced by some outside forces. On the other hand, we know that in the case of some acts the person can render to himself or to others a series of logical steps which he has undertaken in reaching the decision. In actual life, as we observe it, we find that a large number of decisions to act depend predominantly upon a more or less elaborately undertaken intellectual appreciation of the situation whereby the person decides upon the proper forms of response. In addition to this we find the occurrence of certain acts wherein the person cannot or does not want to give any special reasons in terms of the understanding of the relationship of the acts to the situation. In both of these alternatives one probably never deals with a clear-cut differentiation since we find, even in the most logically conceived decisions, determinants that cannot be appreciated on that basis, and vice versa.

An analysis of such decisions to act will show most frequently that they are based upon an interaction of two components: (1) The performance of the act as it is *desired* by the individual; and (2) The performance as it is permitted in view of the appreciation of the relationships within the situation. In both of these components there may be some elements that the person himself sees clearly and which render the performance a result of personal approval, and others which the person may not grasp, but which, nevertheless, force themselves upon him as deciding factors. In the first case one speaks of voluntary activity, in the second of involuntary. From the point of view of the phenomenology of behavior, this is as far as one would wish to go in the discussion of the much-disputed problem of *will*. Whether such a concept as "Free Will" is tenable or not is a matter that we prefer to leave to the field of philosophy. Psychologically, especially in view of more recent studies, we are rapidly coming to appreciate that a great many more acts are dependent upon logically conceivable occurrences within the individual than we have hitherto been able to see. This would mean that instead of the opposites vol-

untary and involuntary, we will, in referring to decision, have to take into consideration the difference between apparent and real causes. Philosophically, this concept is not unlike Spinoza's, who searches for the freedom of man not in his "will" but in his ability to understand.

In subjective experience we still find the occurrence of the element of will, and in our discussion when we refer to some decision as "voluntary" we mean that the person making the decisions experiences them as such. In psychopathological cases we find various degrees of disturbances in this field of voluntary decision. It is quite clear that in the normal individual there is a certain desire to know why one acts in a given way and to be able to keep these acts within the field of one's voluntary decision. Even there we find the type of person who cannot make up his mind to do anything. No matter how well he may appreciate his method of behavior, other and better possibilities keep suggesting themselves, and he usually settles the question by asking someone else to make his decision for him. This is not a question of considering the various alternatives with someone else but is simply the inability to decide and the desire to act on someone else's advice. In pathological material we meet with this inability to decide in a great number of cases, and in its extremes it may reach a point where the person's activities are completely paralyzed and he places himself entirely in the hands of some other person. This phenomenon is particularly common in some of the cases of the neuroses (this concept will be discussed later). It is also found in some types of depressions where the feeling of unworthiness and lack of self-confidence leads to distrust of one's own ability to make decisions, and finally a certain group of cases that have previously been referred to as constitutional psychopathies, where the person goes through life with a feeling of lack of confidence in himself and his abilities and a tendency to depend on someone else whom he considers more capable.

Opposed to this we find the person with a so-called "iron will" who is quick to decide and to act on the basis of his own appreciation of the situation. This may be a normal way of doing things and one which is quite compatible with existing

situations. On the other hand it may be dependent upon an exaggerated notion of one's own abilities to comprehend situations as well as upon the accelerated speed in the rate of associations and judgments. As examples of the first, we find particularly good illustrations among some of the cases of mental diseases that, as will be seen in subsequent chapters, show "ideas of grandeur" and increased self-importance. Their logic may be faulty and their acts continue to get them into difficulties, but they persist in trusting their own choice and acting upon it. Examples of the second are seen in the previously quoted cases of increased mental activity in the manic excitements. In addition to these we find in psychopathological material numerous acts that appear to be performed without any relationship to wilful decision but actually in spite of it. We see, for instance, the phenomenon of the person who after having decided that a thing should be done in a certain way suddenly turns about and does something altogether different. No reasons can be given for this, except perhaps that "one couldn't help it," or one "had a change of mind," etc. Then there are the various decisions grouped under the phenomena of compulsive, impulsive, or automatic acts. We see here such illustrations as the compulsive need of handwashing. If you reason with the patient, he will tell you that he knows perfectly well there is no need for washing his hands continually but he cannot help it. Something within him compels him to do so. There are various forms of phenomena that belong to this field and they will be discussed in a future chapter. We have also the phenomena of compulsions which are believed to come from the outside. Patients of this type speak of someone making them, or telling them to do certain things although they themselves will agree that it is not the proper form of behavior.

Chapter VIII

DISTURBANCES IN EXPRESSION

Concerning Expression

THE FUNCTIONS which we wish to discuss under the term of "expression" are those phenomena of behavior that manifest themselves directly to the outside, and therefore are the most accessible to objective observation. Here we can see and record the phenomena as they appear to us without being dependent upon the coöperation of the individual. We saw that in the fields of reception and of the intellectual functions we dealt with material which, because it was obtained by communication with the patient, was necessarily dependent on his willingness to give us an honest description of his subjective experiences. In expression, however, no matter what concomitant experiences occur at the same time or what the mechanisms and interpretations of the expression may be, in itself, it can be recorded as an observed fact. It will be remembered that in trying to understand what the particular response means in terms of its relationship to the situation we will have to take into consideration a great many other factors. In the interpretation of the meaning of these phenomena we will also have to remember that we cannot always judge the expressions of the mentally diseased person by comparing or contrasting them with similar expressions in the normal individual. We frequently find in psychopathological material that a form of expression, which we ordinarily associate with a certain meaning, actually represents something entirely different. With this in mind we will attempt a discussion of the various possibilities of disturbed expression.

Disturbances in Motility

In a broad sense all forms of expression, whether they take the forms of speech, gesture, writing, dancing, or any other, depend for their execution on some form of motor activity. A disturbance in any one of the expressive functions can thus be considered as involving a motor disturbance. There are, however, certain forms of expression which consist in movement as such, and in the present chapter we wish to start with a discussion of the disturbances in this particular type of expression. We recognize here two possible groups: 1) Disturbances in general motility; 2) Disturbances in the motility of special organs. In both of these we may have quantitative and qualitative components.

1) *General movements*. By these we understand movements as such without any special reference to the special acts performed. a) Here we have first of all the disturbances in *quantity*, i.e., increase or decrease in the amount of movement. In the direction of *increase* we find the type that is usually described as *fidgety* and *restless*, the person who cannot sit still and is continually engaged in the carrying out of some motor function. The restless child at school is a good example of this type. He moves around in his seat, plays pranks on the other children or on the teacher, shifts things about on his desk, etc. In the grown person we find the type who, when engaged in a conversation, will probably keep on manipulating articles about him on the desk, in his own clothes, and so on. In the field of the psychopathological we find this increase taking on greater dimensions. There is a lively play of facial expression. The hands and feet are in continuous motion in accompaniment to the patient's conversation. He picks up things around him, immediately throwing them away and picking up others. When left alone he will walk about in his room, repeatedly dress and undress himself, change around his furniture or bedclothes. He may even go to the extent of breaking things up, tearing up his clothes, or the bedclothes, breaking the windows, and so on. In some cases this increased activity may take on more disorganized features wherein the person may run around in

circles in the room, bump his head against the wall, scratch and bite himself. On the other hand, even without his being conscious of it, he may continually carry out movements relative to some type of occupation (occupational delirium). Such patients will usually carry out some activity to which they have been accustomed in previous days. A painter will keep on painting the walls with an imaginary brush or with his hands. A tailor will make sewing movements. The farmer will make movements as though he were plowing an imaginary field.

Similarly in *decreased* activity we may find even in normal persons a remarkably decreased amount of movement. During an interview, they will remain stolidly in their place without carrying out any kind of movement, the facial expression will remain set, or, if a movement is carried out, it will be done much less actively than is usually the case. In psychopathological cases we find examples of further decrease in movement. Patients will remain in positions for a long time whether the expression of their whole posture or face indicates the underlying experiences or remains bland and stiff. The general quantity of movement is decreased. We speak of this as *motor retardation*. It may go on to cause a total absence of visible movements which, if accompanied by absence of other observable activities, is spoken of as stupor. In this inactivity the person may be relaxed or may become stiff as if frozen in a certain posture. In some of these cases we may find that when a change is made in the posture either of the whole body or any part of it, the person will maintain this change without any attempt to regain the original position. We speak then of "catatonic states," and the tendency to retain postures of all or some parts of the body is spoken of as "waxy flexibility." Decreases in the general motility of the individual are also found accompanying the other types of disturbances described under the heading of "decrease in the quantity of features characteristic of general behavior," such as sopor, torpor, coma, etc.

b) *Qualitative disturbances*. Here we meet with pathological movements that differ qualitatively from those seen in normal persons. A typical example of such a disturbance is found in the phenomenon of *convulsions*. These consist of periodically

occurring attacks, characterized by peculiar changes in movement and posture of the whole or part of the body and are totally unlike anything we see in normal life. They may have special patterns such as occur in the epileptic convulsion. Here we find that at a certain time the patient, after a premonitory signal which is known as the *aura*, suddenly stiffens with his arms and legs held rigidly and he remains in this, which is known as the *tonic* phase, for a certain length of time. After this period of tonicity is past the person goes into a state of generalized jerky movements of different parts of his body. His face, his arms, his legs, may all undergo short convulsive movements, and this stage is known as the *clonic*. This convulsion may start simultaneously over the whole body or may start in some part and spread to the rest. It may remain limited to one side or one part of the body and never affect the others, such as is the case in "Jacksonian epilepsy." It may be, and usually is accompanied by a loss of consciousness but in some cases, especially in the Jacksonian types, the person may retain a clear consciousness throughout the convulsion. In some forms of convulsions one may have a more organized although still abnormal type of movements, the person appearing to go through a certain drama during the convulsion. This is especially noticeable in the *hysterical* convulsion. To this field of disturbances in general motility also belong the movements known as "choreiform." Here we deal with quick, lightning-like contractions of muscle groups, sometimes affecting the whole body, at other times only certain parts of it. The most frequently affected are the hands, muscles of facial expression and tongue.

2) *The movements of special organs.* In the discussion on general movements it was pointed out that the disturbances met with there do not necessarily have to be general and may sometimes be limited to some special organ or groups of organs. Some forms of disturbances in motility, however, occur predominantly in limited areas, and for that reason will be discussed separately. Here again we deal with quantitative and qualitative disturbances.

a) *Quantitative.* One of the most frequently observed phe-

nomenon of abnormally increased movement is that of *tremor*. Normally we find tremors of a certain type in such organs as the fingers, for instance. Pathologically, tremors may occur in an exaggerated fashion in organs where they are found normally or they may be observed in other organs where normally they do not occur. Tremors may be of different types, varying in speed, regularity, amplitude and phase. Thus we may have tremors of a rapid or slow rate, rhythmical or irregular tremors, coarse or fine tremors. The tremor may occur in direct relationship to certain phases in movement or without any relationship to these. In some cases the tremor may be present when the organ is at rest and disappear when a movement is started; in others they may occur or be intensified only when the organ is at work (*intention* tremors). Although pathological tremors may be found in a great many organs they are most frequently observed in the fingers, facial muscles, tongue and head. We may also find pathological increases in other normally occurring movements but these are more closely related to disturbances in organized motor activity and will be discussed later.

Decrease in quantity is most frequently found in the forms of *paresis* and *paralysis*. By paresis we understand a weakness of a given motor organ which usually accompanies concomitant diminution of movement. By paralysis we understand a total absence of voluntary movement in a given organ. Paresis or paralysis may occur in one or more organs at the same time. Thus we have a paralysis of one arm and one leg on the same side (*hemiplegia*) or of all four limbs (*tetraplegia*), etc. In some cases we find the paradoxical combination of weakness plus tremor. Then we may also find that the paralyzed limb, although incapable of voluntary movement, will contract reflexly at the slightest touch. In some functional cases we may find that, whereas the arm is paralyzed as far as conscious, voluntary movement is concerned, it may carry out complicated activities under suggestion or hypnosis (automatic writing in cases of hysterical paralyses).

b) *Qualitative*. Here we deal with movements in special organs or groups of organs, that do not occur normally. A com-

mon manifestation of this type is that of *tic* or habit spasm. These are spasmodic movements of various groups of muscles frequently occurring periodically, without any apparent reasons. Winking, snapping of the fingers, wrinkling of the forehead or nose, shrugging of the shoulders, are some of the more usual forms of tics, but they may also occur in the form of movements that have no analogies in normal behavior. Another type of qualitative disturbance is found in the *athetoid* movements. These are slow, more or less rhythmical, "squirming," involuntary movements especially noticed in the fingers and toes but also in other organs. Somewhat related to these are the *torsion* spasms, which usually affect larger groups of muscles such as the arms, shoulders, lower limbs, the head, or may be generalized over the whole body.

It will be noticed that in discussing these phenomena we have not referred to the mechanisms, which may be responsible for them. The different forms of disturbances may be due to various causative factors, some of them being due to organic disease of the nervous system or of the rest of the body, others to what is known as functional or psychogenic causes. Phenomenologically, however, we are mainly interested in what can be observed objectively rather than what the cause of these phenomena may be.

Disturbances of Speech

Before we attempt the discussion of different forms of disturbances that are met with in this medium of expression, we must emphasize the fact that the term "speech" is applied here in a rather restricted sense and does not include a number of phenomena that are frequently referred to under the concept of speech. Thus, in discussing disturbances of speech, one may sometimes include both the expression of abnormal contents in normal words, and disturbances in speech itself. In this chapter we shall limit ourselves to the second, as the first is fundamentally concerned with such considerations as disturbances in associations, judgment, certain subjective experiences, etc., which belong to other sections of psychopathology. Then also we may, under the term of speech, refer to two separate functions, i.e.,

1) the function of the reception of contents through the spoken word; and 2) the conveyance of personal contents to the outside. Since in this chapter we are mainly concerned with speech as a medium of expression, we shall restrict ourselves to a discussion of the second. The first, that is, the function of the reception of contents through the spoken word, has already been discussed under the heading of *Symbolic Appreciation*. At present, therefore, we shall restrict ourselves to a discussion of the disturbances in that phase of this function which consist in the expression in terms of speech of conscious subjective contents.

The first question that arises in connection with this definition is whether under this phase of speech we should understand only the externalized speech as it is perceived by the observer or whether one should also include the so-called *inner* speech in which the individual expresses his own thoughts, so to speak, to himself without actually vocalizing them. That such activity is possible is at present beyond any doubt. Whether or not a person is capable of conscious thoughts that do not within himself take the form of words, that is, whether or not thought processes really consist in internal speech, is a problem which is not as yet satisfactorily settled, and is, furthermore, not of particular importance to our present discussion. From personal experience we know that whatever other means of conscious thinking we may have, we certainly can think in words. Experimentally it has been proved that the mere thought of a certain sentence will permit us to pick up action currents in those muscles that would have served in vocalizing these words if we had actually spoken them aloud. However, this again does not belong to the discussion in this chapter since what we are interested in here is that part of behavior which expresses a response to the outside and which can be observed as such, in an objective way. The picking up of action currents in themselves, although a definite fact in observation, does not deal with speech as such but with certain physiological concomitants of it.

In discussing the aspect of speech which we have defined above as belonging to the present discussion we have to consider several functions: 1) the actual formation of word sounds

by the activity of the muscles, nerves, and other organs which are grouped under the term of the peripheral speech apparatus, the function itself being known under the term of *articulation* and *phonation*; 2) the formation of these sounds into symbols or words and the ability to arrange these symbols in such a fashion that the content intended can be conveyed to the outside, i.e., *symbolic expressions*; 3) the manner in which this arranged material is conveyed as a whole to the outside, or *communication*.

I. *Disturbances in phonation and articulation.*¹⁰⁸ Here we deal with the disturbances that are conditioned by the pathological functioning of those organs that are responsible for vocalization. Pathological conditions of that group of muscles which help in forming sound, the nerves that supply them, or the cavities that make the production of such sounds possible, all enter into the mechanisms of such disturbances. The different words that go to make up speech in order to be understood by the outside must be of a certain pitch, volume, and degree of inflection. They must follow each other in a certain order, and must bear a certain relationship to one another. An interference with any of these functions will cause a deviation from the normal manner of speech. Even within normal limits we find certain aberrations from the average. Speaking in a very loud or a very low tone can be considered as deviation from average, since it may interfere in one way or another with the ability of the outsider to perceive the meaning. Pronounced deviations in both directions may attract the attention of the listener to such an extent that he cannot concentrate on the actual meaning of the words. In cases of a very low tone the pitch may be reduced to a point at which the sounds are not perceived at all. Here we speak of *aphonia* which may range from certain degrees of hoarseness or whispering to a point where one can only observe the movement of the lips without perceiving any sound. This, of course, must be differentiated from *mutism* where there is actually no attempt made to produce any sounds, and which will be discussed in the section on *Communication*.

In the process of articulation we may also have interferences with the actual formation of the sounds. Certain syllables may

be dropped out or transposed; consonants may be mispronounced, such as, for instance, the use of "w" instead of "l" or "r," or the inability to pronounce some consonants when they come at the beginning of the word, for instance, the dropping off of "g's" or "c's" at the beginning of a word although in the middle they can be pronounced quite well. These disturbances are sometimes referred to as "lipping." Then we find disturbances of *inflection*. In the course of speech the different syllables in one word and the different words in a sentence must vary in the degree of inflection with which each one is pronounced. In disturbances of this function we may find, for instance, that all the syllables of words or the different words in the sentence may be pronounced in one tone without any appreciable emphasis on any of them, a condition which is referred to as *monotonous* speech. The different syllables in the words may be pronounced slowly, hesitatingly, and with pauses between them, in which case we have the so-called *syllabic* speech. Hesitancy may occur between the words, each one of them coming out in an explosive fashion (explosive speech). In disturbances of the innervation or the function of the palate, tongue, and other muscles and organs of speech, we have various forms of disturbances in speech that are referred to as *dysarthrias* (*pseudo bulbar*, *paretic*, *arteriosclerotic*, etc.).

II. *Disturbances in rhythm*.¹⁰³ For a proper functioning of the speech apparatus in the normal individual we must also have a certain rhythm with which the sounds are emitted. When this is disturbed we may have different types of deviations grouped under the term *stuttering*. In such cases blocks occur at certain parts of the speech, during which the person may keep on repeating one sound until he is able at last to pronounce the whole word, or he may not be able to utter any sound at all. A number of coincidental movements of other parts of the body may be observed, accompanying these difficulties in rhythm. These may be in the nature of tics, jerkings, tremors, mannerisms of facial or other musculature, and so on.

III. *Disturbances in symbolic expression*. *Aphasia*. Under this term we shall discuss the disturbances in that aspect of speech which is concerned with the production of words in their

capacity as symbols, or in the arrangement of words into properly constituted sentences to serve the function of conveying meaning to the outside. We must remember here that the formation of words or sentences is a very complicated function and usually expresses the state of integration of the whole functioning individual. We are not justified in regarding aphasic manifestations as being necessarily attached to certain localizable structures in the brain or elsewhere in exclusion to everything else. We must also remember that under the term "aphasia" one sometimes refers to the inability to understand spoken words, a disturbance which belongs to the field of reception and was discussed under that section. Following the form of presentation in the work of Head, to which the student is referred for an exhaustive treatise on this subject,³⁵ we will discuss the different forms of aphasia under the following concepts:

(1) *Verbal aphasia*. This consists of a difficulty in forming words for external speech. In severe cases the patient may be reduced to almost complete dumbness and cannot even repeat what has been said to him. This does not necessarily have to involve his comprehension of the spoken word, as quite a number of these patients may be able to carry out orders, showing that they understand what they hear, although a certain amount of interference in this field may be found to accompany verbal aphasia. The patient is capable of emitting sounds and therefore we cannot speak of *aphonia*. Furthermore, it is not in itself a disturbance in articulation; that may remain intact.

(2) *Syntactical aphasia*. This is a disturbance in the proper balance, rhythm, and syntax formation. The patient has a sufficient number of words, each one of which is pronounced properly, but their arrangement into coordinated phrases is defective. This leads him to talk in jargon and consequently, in severe cases, does not permit of being understood by others. The comprehension of what is spoken to him may either remain intact, or may also be interfered with to a greater or lesser extent.

(3) *Nominal aphasia*. This deals with a loss of power to use names for concepts and is usually associated with a lack of comprehension of the value of words and other symbols. When given objects and told to name them he will fail to do so prop-

erly, but will, in most cases where there is no concomitant verbal aphasia, give other names for them. Thus a watch may be named an apple, a pen may be said to be a key, etc.

(4) *Semantic aphasia*. This deals with the want of recognition of the full significance of words and phrases apart from their direct verbal meaning. This type of aphasia is really more properly related to the perceptive functions and comes into consideration here only inasmuch as it also interferes with the proper communication. The comprehension of the whole structure of what the patient himself wishes to convey is interfered with and is consequently poorly expressed.

IV. *Communication*. Apart from the actual pronunciation of words with their proper inflections, rhythms, and arrangement into sentences, we may have disturbances in the communication of thoughts to the outside in cases where the other functions may remain normal. These disturbances may be of quantitative or qualitative types.

(1) *Quantitative*. Here we have, first of all, the question of the actual number of words used to express a given communicable content. Even in normal individuals we find wide variations in this respect. Along the direction of increase in communicativeness, we may find a tendency toward *circumstantiality* and *volubility*. The person seems to talk for the pleasure of hearing the sound of his voice. Ideas that could be expressed in short sentences with few qualifications and digressions are dealt with in roundabout, circumstantial ways. A great many side issues which are only superficially related to the question at hand are brought in, digressions are made into all kinds of fields, each word or sentence suggests other possibilities and these are gone into in great detail although they are not necessary in making the main topic understandable. With such people it sometimes becomes very difficult to get the principal idea of what they are saying. Phrases are piled on top of other phrases, clauses that could be omitted are brought in at the slightest provocation, and the whole is rendered intricate and ponderous. In some cases this is conditioned by the lack of clearness in the person's own mind, in others it is caused by a pronounced tendency for taking care of possible necessary

qualifications. In pathological cases it may also be conditioned by distractability, where unimportant but casually related contents are brought into the conversation. It is usually found in cases of increase of associations, as we have seen them in the manic patients. In the latter this tendency, when it is very pronounced, is termed *flight of ideas* and interferes with the ability of the person to keep to the goal idea with which he began.

Similarly, we find disturbances in the form of decreased communication. In such persons we find a sparsity and stinginess in words. The sentences are short, the pauses are long, the person always tries to express himself in the shortest possible way. When this is accompanied by particularly long pauses, we refer to it as *retardation* in speech. In extreme cases not only the sentences but the words themselves are shortened. The people answer in monosyllables wherever possible, or where it is considered at all possible answers are given in terms of yes or no. In extreme cases of this type we may reach a stage where no speech is produced at all. The person can speak, in so far as articulation and symbolic expression go, but he prefers to remain silent. This may be an extreme expression of decrease in communication, or it may represent a definite decision on the part of the person not to say anything at that particular time, whereas at other times his speech may be normal or even increased. This is known as *mutism*.

(2) *Qualitative disturbances*. We deal here with forms of communication in which the content to be expressed is distorted. It should not be confounded with the aphasic disturbances because here the person is capable of pronouncing words and of forming sentences. They do not convey properly, however, that which is expected from them under the circumstances. The most typical widely encountered manifestation of this disturbance is that of *confabulation*, wherein the person makes statements that he consciously knows to be untrue. We must guard against confusing this with *pseudo-reminiscences* where apparently the person actually believes that he is telling the truth, or with the phenomenon known as *pathological lying* where the person, although originally knowing that he was not telling the truth, may gradually get to believe what he once

said, and continue in that belief. In the ordinary cases of confabulation, however, we deal with intelligible, although at times fantastic, statements.

In another group of qualitative disturbances we may deal with statements that do not make any sense when considered as a whole. The person quoted above who, in answer to the question, "What is your husband's name?" gives the answer, "One, two, three and a six, seven, eight," shows this type of disturbance. Frequently the answers in themselves are well-constructed and intelligible, but when we try to understand them in relation to what has gone before, they appear bizarre and unintelligible. This is true not only of answers to questions, but may also be found in spontaneous productions. Whatever each of the sentences in these productions may mean, the whole makes no sense and sometimes it reaches a stage where even the different words do not show any relationship to one another. Where these words are monotonously repeated we speak of *verbigeration*. Such productions are sometimes designated as *word salad*. The following is a specimen of such production:

The patient, an advanced case of schizophrenia, was interviewed on the ward. She was talking to herself and laughing occasionally. She started out with the following production: "Shenandoah, they have seed houses there. Seed houses at Clarinda too. I was there once and while there I had a 'persnickety' spell. They knocked me on the head; no, they gave me a hypo. Northwestern, southwestern teachers institute. I was in that schoolship too. Chickens, and they chase you all the way back. Four hundred of them, but where are the banties? Bameha or Bameja. I am not too much good. Why all the fuss of putting on nice dress. You are funning. Sunday isn't so much to brag about. About all I know is nothing. Oh! Oh! Oh! I have killed my child."

As can be seen, the different sections of the production do not seem to be related to one another and in each sentence at times the words themselves are not related in an intelligible fashion. The words and sentences, although produced in a rapid fashion, do not show any of the superficial relationships that one finds in the manic case. Another feature noticed in this production is the interposition, now and then, of apparently meaningless

words. They are words which are pronounced clearly, sometimes even spelled by the patient, but which do not mean anything to the observer. In this particular type of mental disease, we meet quite frequently a tendency to coin words of this type known as *neologisms*. In most cases it is impossible to see not only the relationship of these words to other words but also what they actually mean to the patient, if indeed they have any meaning.

In response to certain questions this patient shows the following neologisms: Question, "Where did you see me before?" Answer, "I have seen you but your words alworthern." Q. "What does alworthern mean?" A. "Ashens. Guiding the circumfrax." In another section of the same interview to the question, "Can you tell me what love is?" A. "Love? Gians. Virtues of the vain and rhenebal of the wehlein." Q. "What does that mean?" A. "Vaigs." The patient, prior to her development of the disease, was a school teacher and was particularly interested in German and Old English. Some of these newly coined words could afterwards be analyzed into components which stood for German and Norse derivatives, but in the neologisms themselves the original words were condensed and distorted into new shapes.

Chapter IX

DISTURBANCES IN OTHER FORMS OF ORGANIZED MOTOR EXPRESSION

Gesture

OF ALL the organized motor activities of expression the phenomena which bear the closest relationship to speech are those of *gesture*. In the normal person expression through the medium of speech is nearly always supplemented by gesture. Various movements of the facial musculature such as smiling, frowning, winking, grimacing, as well as gesticulations with the hands, shrugging of the shoulders, shaking and nodding of the head, all serve the purpose of accentuating or qualifying the meaning of what is spoken. Even within the limits of the normal we find quantitative deviations from the average in this respect, but in pathological behavior we meet with disturbances in quality as well as in degree.

(a) *Quantitative disturbances*. Here we deal first of all with deviations that manifest themselves in exaggerated expression through gesture. Within normal limits we find persons who show a pronounced tendency toward frequent punctuation of their remarks by means of gesture. Such a person usually tends to act out his narratives. In giving an account of a fight that he has witnessed, he will go through various movements actually intended to represent the occurrence as he tells it: he will charge and feint, hit and defend himself, his facial expression will change in accordance with the reception or the delivery of a blow, as he lives through the story that he is telling. In people of this type we may even find an attempt at a more or less complete substitution of words by gestures. In listening to another person speaking such a person will vigorously shake or nod his

head as he agrees or disagrees with the speaker. When he is perplexed he will shrug his shoulders, when he is amused he will wink or grimace, and so on. The tendency of some types of people to wave their arms about and gesticulate in a pronounced fashion with their hands, especially under emotional distress, is a well-known type of occurrence.

In psychopathological material we find still further exaggerations of this tendency. It is frequently encountered in the cases of "manic" excitement where pronounced or even violent movements of different organs of expression constantly accompany the voluble production. In some cases the expression through gesture is conditioned by the existence of a disturbance of speech. We also find it, although in a somewhat different form, in those cases where for some reason the patient is very much concerned in impressing the outside with additional evidence of certain experiences that are supposed to be going on within him. In such cases the registration of emotional states, in a manner not unlike the familiar caricatures of motion-picture acting, is undertaken with a great deal of elaboration and earnestness of purpose. The person will register perplexity and the feeling of being lost by putting the hand up to the forehead in the "Where am I?" fashion. The slightest noise may evoke an exaggerated reaction of fear, the patient jumping up and taking on various types of defensive postures; amusement is accentuated by loud, boisterous laughter, sadness by equally exaggerated crying, and so on.

In a similar fashion we find a series of quantitative changes in the direction of diminution of gesture. Here we find also that within normal limits one meets with the type of person who is very sparing in his gestures, and, whether or not the general motility is decreased, his speech is very rarely, if ever, accompanied by gesture. He may act quickly when necessary but in the course of his speech he remains, as far as his motor expression is concerned, impassive and unchanged. In the field of the psychopathological we find various types of accentuations of this decrease of gesture. Of the most important forms we would stress particularly two types. The first occurs in those cases where there is an accompanying decrease of general mo-

tility with or without a concomitant feeling of depression. When it occurs in connection with depressions, the person's lack of gesticulation accompanies, but is in excess of, a similar decrease of speech. The person is simply not interested in communicating with others. He may feel forced to answer when asked in a direct way, but the lack of interest in what he says and the feeling of hopelessness are certainly not conducive to further elaboration on the spoken word by means of gesture.

In some cases the decrease in gesture occurs without the feelings of depression but accompanying a decreased general motility as is found particularly in organic disease of the central nervous system. This is possibly best illustrated in the decreased motility of the so-called Parkinsonian syndromes. These persons are probably very much interested in expressing their feelings to the outside, but the disease causes a slowness and stiffness of function in the muscular system and it is because of this that their faces remain immobile. Where the normal individual would have changes in expression, their heads, shoulders, hands, etc., either do not move at all or move in a sort of bradykinetic style which reduces if not entirely destroys the effectiveness of the gesture.

A reduced form of gesture may also be found in psychopathological material without a concomitant decrease of general motility. We have already alluded to that possibility in the case of normal individuals, where it is a matter either of a constitutional tendency or an acquired characteristic. The latter is well-illustrated in the proverbial lack of expression of the experienced poker player. In psychopathological material we often find this in association with exaggerated introversion. Such people may go through an emotional stress and excitement without showing any indication of it in the form of gesture or expression. If a gesture is undertaken it is slow and deliberate and appears somewhat forced. In this connection we should also mention the tendency in some cases of substituting gestures and gesticulation for speech. From a phylogenetic point of view, this form of disturbance bears a close relationship to the more primitive stages of human development when speech had not as yet developed to the extent to which it has in modern life, and where

gesticulation was the more common form of expression. We find quite frequently that in certain cases of mental disease there is a regression to this more primitive form of expression, and, although the person will refuse to answer in form of words, he may be induced to answer questions by gestures, or he may do so by preference.

(b) *Qualitative disturbances*. Here we deal with two types of phenomena: first, the inadequacy of gesture, and second, the occurrence of gestures which are not usually found in normal persons. In the first we deal with the distortion of expression by gesture in such a way that gestures usually employed to express one type of communication are in these cases used to express altogether different ones. The shaking of the head when the person intends to say yes, a supercilious manner of raising the eyebrows when the person is actually perplexed or afraid, and numerous others, can be found in this group. They are closely related to the inadequacy of emotional expressions and will be further discussed in that connection. A series of gestures not usually occurring in normal people is sometimes found in some psychopathological cases. These are known under the collective name of *mannerisms*. They may be symbolic of certain occurrences within the individual and sometimes their symbolic significance may be understood. At other times it is impossible to see any relationship between these mannerisms and any other occurrences that take place within the person. These gestures may change in a rapid fleeting fashion, or they may remain in a fixed manner for a long time. The so-called *schnauz-krampf* is one type of this disturbance. The lips are pressed together in an unnatural and exaggerated pouting expression without any concomitant reaction in the other parts of the facial musculature. The fingers may be intertwined and distorted in various abnormal shapes, the hands and arms held in various characteristic fashions such as, for instance, crossed on the chest in the form of prayer, and so on.

Disturbances in Coördination

The performance of complex motor acts requires the co-action of certain sets of muscles so that the person may carry out the

act in a smooth and efficient way. Certain parts of the central nervous system as well as the peripheral nerves and muscles have come to be associated with the integrative quality of these interactions, and their proper functioning is essential if the co-ordinated quality of a movement is to be preserved. Since most muscular movements require not only a perfect co-action of all the muscles that are used in the performance of this motion, but also a certain state on the part of those muscles which, if contracted, would interfere with this movement, a proper relationship must be assured between these opposing groups of muscles if coördination is to be preserved. Most of the disturbances in this field are related to definite organic disease and, because of that, they do not belong fundamentally to the field of psychopathology. They interest us here particularly because similar forms of disturbances in coördination may also occur in some psychopathological conditions. These disturbances are not as a rule identical with the type that occur in organic disease, and in order to differentiate them a thorough knowledge and understanding of the neurological significance of coördination or lack of it is essential. Psychopathologically, all of these disturbances gain significance from two points of view.

a) The disturbances of coördination that are due to organic lesions will necessarily interfere with the usual type of adjustment. They place a certain load on the person for which he has to compensate and to which he must adjust himself. Because of that we find that practically no disturbances of coördination can be said to be purely of organic nature for there is always a superimposition of compensatory and substituted psychological manifestations. When a person, for instance, is suffering from a disease which causes an inability of smooth coördination in bringing the hand up to the mouth, he will usually undertake various modifications and substitutions for the purpose of assuring as successful a form of adjustment as is possible in view of his difficulty.

b) In certain types of psychopathological conditions we may find disturbances in coördination which, although not altogether like those that are due to organic disease, nevertheless approach them fairly closely and may simulate them. We find

these especially often in cases where for some reason the person is consciously or unconsciously playing the part of one suffering from a serious organic disease. In conditions of this type we find bizarre disturbances in coördination, exaggerated tremors, and interferences in associated movements.

Disturbances in Gait

The function of gait is a special form of coördinated motor activity undertaken for the purpose of locomotion. Within the limits of the normal there is a marked degree of variation in the manner and speed of walking. The position of the whole body during the performance of this act, the length of the stride, the manner in which the arms move while walking, the speed with which it is carried out, the position of the different parts of the lower extremities, vary to a great extent. In the abnormal forms of gait we may deal with various distorted forms. The most frequently encountered are those that occur in organic disease. We deal here first of all with the so-called *paretic gait* where, because of the weakness of paralysis, whether *spastic* or *flaccid*, we will have different ways in which the weak limb is carried as well as different degrees of function of which it is capable. When both legs are affected we may have the so-called *spastic gait*, where both legs are held in a stiff fashion. The *goose-step gait* is characterized by the fact that at each movement the leg that is shifting is lifted high off the ground, bent at the knee with the toes dropping down, and then more or less flatly placed on the ground when the weight is to come down upon it. The *broad-based gait* is similar to the type that we find in sailors, but here it is due not to the instability of the surface on which they move, but to the fact that a disturbed sense of position causes a reeling from side to side if the two feet are not kept at a certain distance apart. The *shuffling gait* or the *marche à petites pas* is frequently found in cases of senility or *arteriosclerosis* where short, shuffling steps are taken in an uncertain fashion.

Certain types of gait are characterized by an absence of associated movements of the arms. In these cases we may also

find a stiffness of the whole upper part of the body with the head and shoulders pushed forward and, in the whole performance of the act, a tendency of the torso, so to speak, to get away from the legs. This is known as *propulsion*. In these cases we also find occasionally an inability to walk backwards, since the opposite of propulsion, that is to say, *retropulsion*, may cause the person to fall over backwards. In both of these types we find the person starting off slowly, but gradually increasing the rapidity of his steps as if the feet were trying to catch up to the movement of the upper part of the body. Usually such patients end up in a run and sometimes may fall down.

From a psychopathological point of view, we may deal here, too, with the following possibilities: (1) Where the organically-conditioned disturbances of gait call forth a superimposition of other symptoms for the purpose of adjustment; (2) where, in the absence of organic diseases, disturbances occur either like those of the organic disease or of a different form. A frequently occurring example of the latter is the so-called *hysterical abasia*. In this the person walks in a distorted, nondescript fashion, reeling from side to side, buckling at the knees, and showing numerous other disturbances, but without any actual accidents in the form of falling down. When this is associated, as it frequently is, with a similar type of disturbance in station, we have the so-called *astasia-abasia*. Another form of disturbance in gait that occurs in psychopathological cases is the stiff *toy-soldier-like gait* that is sometimes found in schizophrenics. The person seems to be walking as if in a dream, mechanically moving his arms and legs with an automatic precision and without any concomitant expression.

Posture and Station

When a person is at rest, whether standing up, sitting, or lying down, he assumes certain characteristic postures. Various differences in posture and station may be noted within the limits of normal, such as the erect, easy posture of the trained athlete, the stiff, chest-out, shoulders-squared station of the disciplined soldier, etc. In the average person we may also find certain deficiencies in posture and station due to habit formations either

because of occupation or because of certain psychological states. Thus we have the round-shouldered, stooped posture of the person who has spent his life over a desk, the slouchy posture of the weak asthenic type, etc. Various types of posture and station may be assumed temporarily or permanently in the expression of certain states of emotional stress, such as the cringing, defensive type of posture of the maltreated child or adult, and the relaxed, dejected expression of the whole body as well as of the face of the person who is depressed or sad. In abnormal states we find various exaggerations of these or the occurrence of altogether new ones. A large number are encountered in cases of organic diseases. Thus we have the inability in certain cases to maintain the upright posture when the feet are placed together. In some cases the person cannot hold this posture with his eyes closed, and in others he is unable to do so, even when his eyes are open. In such conditions the person will reel if not supported, and may fall down (this is the so-called *Romberg* test). Then we have the type of station that usually goes with the diseases that are responsible for the Parkinsonian syndrome, where the posture is stiff, the torso bent somewhat forward, the head and shoulders well over the vertical line of the feet.

In certain forms of psychopathological conditions we find other characteristic stations and postures. The nondescript, distorted form described as *astasia* has already been referred to. In cases of some forms of schizophrenia we have a stiffness of posture which goes with a similar stiffness of the facial expression and movements. In these cases there frequently occurs the assumption of abnormal positions either of the whole body or of certain parts of it, which may be maintained for a long period of time (catatonic postures). Such a person, for instance, may be found lying in bed flat on his back with his arms stiffly held against the sides, the legs stiffened out straight, the eyes closed, and the whole posture rigid. In such a person, if we change the position of any one of his limbs, this new position may be maintained for the longest possible time. When one arm is lifted perpendicular to the rest of the body it will remain in that posture in a fixed, waxy manner. This is known as *cerea flexibilitas* (waxy flexibility). These persons may also be found in similar

stiff positions either sitting or standing, and here too the "waxy flexibility" is retained. Some of these cases maintain these postures for as long as months or years. One patient was observed to stand in the corner of the ward on one leg with the other bent at the knee and twisted around behind the other, day after day, and changing this position only when he was made to do so on being placed in bed. The posture of any one of the limbs in a position of this type may even be held while in bed, in which case the tendons and joints may become fixed in such positions, causing contractures.

Writing

The function of writing is another of the organized motor activities and is very closely related to speech. In it, just as in speech, we find an expression of all those activities that were described under the heading of the intellectual functions. In writing, therefore, we may also have several groups of disturbances not all of which would come under consideration at present. We must differentiate first of all between the understanding of the written word in the form of reading and the writing itself. Only the second would come under consideration in this discussion of expression, the former being really part of the receptive functions (alexia). Then we must bear in mind that writing may be abnormal because of an abnormal content that is expressed in normal writing, as contrasted with an actual abnormality in the function of writing itself. In this case the contents of the writing may be present in a normal fashion in the individual's mind but he cannot express them in a normal way. It is only the latter that is to be considered in the discussion of writing as a form of expression. With this in mind we will discuss the following abnormalities in this activity:

In normal individuals we find various degrees of variation in this function. The shape and size of the letters or figures, the spelling of words, the carefulness or carelessness in the construction of the sentences, punctuation and other characteristics, may differ in different individuals. The whole field of writing has been given a great deal of attention of late, especially in

the relationship it bears to the character of the individual. Klages and his followers have undertaken an especially careful and exhaustive work in this field and have come to a number of very useful conclusions. It is not within the scope of this text to discuss fully these variations and their significance in general characterology. For this we refer the student especially to the work of Klages.⁵⁵ In psychopathological material, however, we find certain types of disturbances that are closely related to our subject and may be regarded as phenomena of a psychopathological nature. First we deal with the disturbances, mainly in organic diseases, of the actual shape and size of the letters. In some conditions we may have the tendency to write in large letters (*macrographia*), in other cases the opposite tendency to write in very small letters (*micrographia*). In the latter we find in certain types of diseases that the patient starts out with large or normal sized letters, and as he proceeds gradually dwindles down to smaller sizes until he has reached a totally illegible form. Where coördination is disturbed or where weakness or tremors of the hands are found, we encounter various forms of distortion of writing which may also reach a point where it is impossible for the person to write in a legible manner.

In connection with the different forms of aphasia, we have different types of inability to write, known as *agraphia*. In such cases the person may be unable either to form the usual symbols of writing, or, if he can write the letters, may not be able to write the words. He may drop out syllables or letters, transpose them, substitute one letter for another, etc. In some cases of aphasia we may have the inability to pronounce the word accompanied by a similar inability to write it. In psychopathological material we find certain aberrations in writing closely related to these types of organic disturbances or of an altogether different type. Thus in some cases we find that the person begins to write in a legible hand but after having written a certain number of lines will either begin to write on top of the original lines or will simply scribble on top of them. The phenomenon of coining words, referred to as neologisms, may

spread to writing or be limited to it. Thus in some cases where neologisms are rare in speech the person may continue to write series of words or sentences that have no meaning to the observer.

Another series of disturbances in writing may be found in the function of *communication*. Some of these may be similar to the disturbances in communication through speech, others of a new type. Of these we want to refer particularly to several more frequently occurring forms. One of the most common is the so-called "letter writing crank," a phenomenon not necessarily limited to mental diseases. These persons have a pronounced tendency to write voluminous letters to persons of fame or notoriety. The people who find themselves in the public eye may be deluged by letters from such persons. In some cases there may be a certain object in the writing of the letters, such as extortions of money, advice on personal matters, and so on; in other cases it would seem as if these letters are written simply for the sheer pleasure of writing. Some mentally diseased persons show these tendencies in a particularly extreme degree. They may spend day after day and month after month writing letters, not being at all upset by the fact that most if not all of these letters remain either in their own room or in the office of the physician. These letters do not necessarily have any particular object or content in mind. Some of them are written in peculiar fashion and on peculiar stationery. Bits of cloth, napkins, clippings from newspapers, wrapping paper, not to mention more objectionable types of paper, are used by these persons. The writing itself may bear peculiar characteristics, all the words may begin with capital letters, or they may all be printed. Furthermore, we have the writing of such things as essays, poetry, stories, and numerous other productions. In some cases there is a definite organization of the work, the writer wishing to prove or disprove certain accepted beliefs about himself or other people. In other cases, however, they may be totally without any apparent content, word after word and sentence after sentence being written down to make up thick manuscripts without a single appearance of any logical content in the whole thing.

Artistic Expression

The various forms of artistic expression that throughout the history of mankind have served as the medium of expressing emotional or intellectual contents have within recent years been subjected to analytic procedures for the purpose of determining the possible underlying mechanisms. Fascinating as it may be to undertake a study of this subject, there is no place for it here. Whether or not some of the music written by Beethoven was a direct expression of certain emotional conflicts within him, or whether the paintings of Leonardo da Vinci can be regarded as expressive of early psychic traumata in the life of that individual, is a subject that belongs more closely to special or applied psychology or psychopathology. In this chapter we would like to discuss the occurrence of various forms of artistic expressions as manifestations of psychopathological phenomena in mentally diseased persons.

(a) *Painting and drawing.* In every hospital for the mentally sick we find on the wards patients who may otherwise show very little expression or response to direct stimuli, busily engaged in drawing or painting. The productions vary from childish and naïve scribbling to remarkably fascinating paintings or drawings. It is, of course, possible to conceive that a person who, before he became sick, was a gifted artist, could go on for a while producing works of art that were not fundamentally different from those he created before the disease process started. More generally, however, we find that these productions, whether simple and not particularly appealing, or elaborate and on the whole acceptable, usually present very little that is intelligible. At times certain symbolic significance may be found in these productions. The works of Prinzhorn⁹¹ on this subject have shown the different variations as well as the possibilities in this line. Jaspers⁴⁷ in his study of Van Gogh has also shown the relationship of the changes in the styles of this artist to the course of his disease process.

(b) In *music* as in painting we find another form of expression in which phenomena of a psychopathological nature may be manifested. Here we will not attempt to discuss the

possibilities of the psychopathological significance of music created by normal people. In abnormal persons we frequently find a tendency to express psychopathological contents through singing or playing. This may manifest itself in the rendition of music written by others, or in the actual improvisation or composition of original productions.

(c) *Decoration*. This is a very common phenomenon in certain types of mental disease. It is often found in those hospitals where chronic mental cases are confined. The decorations may take on all forms of extremes, may be applied to the person himself or to his room; the different objects used for decoration may be changed very frequently or may be held to with a blind tenacity. There may be some systematic method in the decorations wherein a certain object is kept in mind and the decorations are grouped around it. Thus patients with delusions of being some important person, such as king or military commander, will try to arrange their clothes and put on decorations that will in some way approximate their idea of how such a person should look. In other patients the decorations may serve the purpose of brightening up their appearance, or of lending a certain distinctive air to the ensemble. In the "manic" patients, for instance, we find such things as little bits of brightly colored paper or cloth, flowers, beads, etc., pinned on to the clothes or hair giving the patient a bright, even if bizarre, appearance.

(d) *Dancing*. We have already discussed the different forms of movements that may occur as expressions of psychopathological disturbances. Aside from the restlessness that may show itself in moving about in an aimless, jerky fashion, we sometimes meet with organized movements carried out in the form of dances either similar in nature to the dances carried out by normal people, or types that are in a class by themselves. It is of interest to note that those patients in whom we find exaggerated types of the extraverted tendencies, exhibit in their dancing, too, a certain amount of rhythm and plasticity, their dancing usually being more or less akin to that indulged in by normal people, although it may occur without regard to time or place. In other patients, however, we find queer forms of

dancing with the assumption of abnormal postures and the expression of peculiar symbolic movements. If the former can be compared to the ordinary folk or social dancing, the latter is more like the interpretative and futuristic types.

Emotional Expression

Emotion itself as an occurrence within an individual is subjective in nature and really belongs to the field of experience. The different phases of what happens within a person when he is afraid or angry, when he hates or loves, are contents that we can obtain only through a description by the person himself and will be discussed at a later time. Emotional experiences, however, very frequently lead to certain expressions observable to the outside. These expressions belong to the field of behavior. The different disturbances in this phase of behavior may be discussed under two groups, (1) general, and (2) special.

(1) *General*. Under this group we discuss characteristics of emotional expression that in the given person are peculiar to all his emotions rather than to any one of them. We may have here disturbances in quantity or in quality. Of the first, even in normal individuals, we are familiar with differences in intensity of emotional expression, in the speed with which it follows the reception of a stimulus that calls forth a change in emotions, and the suddenness with which these expressions take place. Thus we have certain people that laugh heartily when they are amused and cry just as bitterly when something sad occurs, as contrasted with the people in whom both of these expressions are quite superficial and fleeting. Then we have the persons in whom emotional expression follows almost immediately upon the reception of the stimulus, whereas others are less easily aroused and it takes them a longer time to reach an expression of their feelings. This is also true in relationship to the suddenness with which the climax of emotional expression is reached. The ancient description of the different types of temperaments is based particularly upon this phase of behavior. The *choleric* individual, for instance, was considered to be the type who is

difficult to arouse emotionally. It takes him a long time to be worked up to a pitch of response, but when he does respond his emotional expressions are intense and they occur with sudden explosiveness. The *phlegmatic* person is aroused with difficulty and his responses are slow and quite frequently not deep. The *sanguine* person is easily aroused, his responses are intense and quick but are fleeting in nature.

There may also be *qualitative* disturbances in the general emotional expression. One of the most important of these is the *lability* of emotional expressions. In this group we have an easy shifting from one type of emotional expression to its opposite. Crying and laughing may follow each other in rapid succession, and so on. Another type of qualitative disturbance is found in the so-called *inadequate* emotional expression. In these cases we have an inappropriate form of expression to stimuli which should, in the normal person, evoke an opposite form of expression. Thus we have the person who, when telling us of some harrowing experience, smiles blandly or laughs. On the other hand he may look sad or cry when talking about some indifferent subject or a subject that to a normal person appears amusing.

(2) *Special*. Here we deal with disturbances that occur in the different fields of special emotions. These disturbances may be found to occur only in connection with one type of emotional experience and not in any of the others. In normal individuals, for instance, we have an illustration of this in the persons who are addicted to crying. Although otherwise not exhibiting any particularly strong or easily aroused emotionalism, they will cry at the least provocation. In others we have this limited, for instance, to the emotion of anger. The person may be otherwise a well-controlled type, but whenever something happens to arouse his anger there always occurs a quick explosive expression or a slowly developing but lasting sullenness. In psychopathological cases we find extremes of these types of reaction. Some patients are continually crying without any apparent cause. Others keep on giggling or laughing without any evident reason for that. In some cases we have the so-called compulsive crying or laughing. In these the patient, when being inter-

viewed, will suddenly break out with tears and weeping, but when asked why he does so he will answer that he doesn't feel sad but he just can't help crying. The same may be true with laughter.

Before we leave the subject of motor disturbances mention must be made of several phenomena designated by terms which are sometimes used in relation to other functions, but are most frequently applied to the motor system. These are as follows:

Stereotypy. By this is meant the monotonous repetition of movements, acts or speech productions in a more or less automatic fashion without any apparent reason.

Apraxia. This term signifies the loss of ability to carry out skilled movements with an organ or set of organs in the absence of actual paralysis of these parts.

Ataxia is a term applied to designate a loss of coördinated movements in a given motor system.

Chapter X

INSTINCTUAL EXPRESSIONS

IN THIS chapter we wish to discuss those behavior activities which are regarded as the expression of instinctual urges in their different phases. The use of the term "instinctual" is necessary, even though it presents certain disadvantages, due mainly to the fact that the term instinct and its derivatives have been used to designate a widely varying group of concepts. In the present discussion we wish to restrict the application of this term to those forms of behavior that are directly concerned with the nutritional and sexual functions of the individual. It must also be remembered that here we are concerned primarily with the expressions of the individual to the outside that are clearly representative of these vegetative functions and not simply related to them. The need for obtaining ingestion and assimilation of food for the sake of gratifying the nutritive urges, as well as the search for an object of gratification for the sexual urge and the carrying out of that act, may be observed in the form of direct expression or in the form of substitute or compensatory activities. Here we will restrict ourselves primarily to the first of these two, and leave the consideration of the second to the discussion of mechanisms and determinants of psychopathological phenomena rather than their description.

Disturbances in Activities Expressive of the Nutritive Instinct

These disturbances, as representative of deviations found within the limits of normal adjustment as well as expressive of adjustments of a psychopathological nature, may be grouped

under the different phases of the gratification of this need ranging from the various activities connected with the obtaining of food and ending with the evacuation of undesirable substance and the assimilation of desirable material.

(a) In that phase which is expressive of the *procuring* of food for purposes of ingestion, we may have, even within normal limits, a large number of variations. These will differ with geographic and racial peculiarities, as well as with the variation in social and economic situations, and individual peculiarities dependent upon early conditioning. In the present stage of civilization and conditions as they exist today, we usually observe a certain amount of activity undertaken to secure food, provide for those that are dependent upon us, and safeguard against the possibility of shortage in the future. These activities may take on extreme forms in certain types of normal individuals and in cases of psychopathological conditions. It may be an increased feeling of responsibility or worry about the future with a tendency to spare and hoard up food in a miserly fashion. In certain psychopathological cases this may go to the extreme of piling up perishable foods even though direct necessity cannot be foreseen for such an act. Contrasted with this is the carelessness and lack of foresight that is seen in some persons where food and its equivalents are consumed or destroyed without any regard for future needs. This does not exhaust all the possible mechanisms underlying the two contrasts of miserliness and extravagance, for, although they may be at times directly dependent upon the disturbances we have mentioned above, they are just as frequently dependent upon other mechanisms that may have nothing to do with nutrition as such.

(b) *Appetite*. In the normal individual we find differences in degree of the desire for food in different persons, and in the same person at different times. We do not refer here to the natural fluctuations in the appetite dependent upon the intake of food. It is natural to expect a person who has not eaten for a certain length of time to exhibit a gradually increasing desire for food. Similarly, with the ingestion of a suitable amount of nourishment, this desire will disappear. We do, however, find

in certain cases fluctuations of appetite that are not dependent upon these facts. Some persons, even within normal limits, may show an excessive appetite, regardless of the amount of food they have obtained, and keep on eating even though the material just ingested is not used up, but is simply stored in the form of fat. In pathological cases, sometimes because of certain organic disturbances, at others on a psychological basis, we find such increases of appetite with an inordinate desire for further ingestion of food. This may lead to severe interferences with the health and adjustment of the individual. Contrasted to this is the decrease of the appetite which also may be based upon certain organic diseases, but, very frequently, may be the expression of some psychopathological condition. The appetite may be decreased so that the person will be satisfied with fewer and smaller portions of food than is compatible with keeping up a proper state of nutrition. It may even reach the extreme state of complete loss of appetite, or *anorexia*. This condition may lead to serious difficulties, the persons suffering from it losing a great deal of weight, becoming weak and dehydrated, and yet, unless fed in some artificial manner, simply unable to work up an appetite. This should be differentiated from the cases where there is a refusal to eat although the appetite is normal. This will be discussed later.

(c) *Ingestion of food*. The actual admission of the food into the mouth preparatory to swallowing and introduction into the gastro-intestinal tract may also show certain disturbances. Regardless of whether the appetite, as such, is good or bad, we may have disturbances associated with the introduction of the food into the mouth. We do not speak of the organic cases where a disease of the mouth may interfere mechanically with this act. We find, first of all, a disturbance expressed in the form of an inability to ingest certain types of material. Most people manifest dislikes to certain specific things which they would not take, regardless of how hungry they were. This is especially true of children where "finickiness" may interfere seriously with the taking of certain types of food, or foods that are prepared in a certain way. In the presence of such idiosyncrasies if the person forces himself or is forced to ingest

this material, he may get rid of it by gagging or vomiting. In some cases, especially in psychopathological conditions, we meet with the refusal of any kind of food. The "hunger strikes" represent this manifestation in people who are considered as being still within normal limits. In psychopathological cases such refusal may have other reasons. In some cases there simply is a lack of interest in things in general, and with that a similar attitude of indifference toward taking food. In other cases it may be based on delusional beliefs that the food is poisoned or that it causes certain harmful reactions. In these cases we may meet with refusal to eat only under certain conditions whereas under others they will show no objection. Thus, in cases of persons who are doing this out of spite or in order to impress their associates, the food may be ingested if the person is left alone and not watched while eating. Where a suspicion of poisoning is found, the food may be ingested by the patient if another person tastes it, or he may eat when the food is prepared by himself or by other people whom he can trust. All these possibilities should be borne in mind especially when one has to take care of patients of this type, because in a great many cases one may avoid having recourse to artificial feeding, if the reasons are understood.

Contrasted with this is the phenomenon of increase of ingestion. This is particularly found in mentally defective persons or where deterioration has taken place. There we find that the person may eat rapidly and ravenously, pushing the food into his mouth in big lumps, sometimes even to the extent of choking on it. It does not necessarily have to be dependent upon an increased appetite. The persons may not ask for food but when it is placed in front of them they gorge themselves on it without any pause or rest. In this phase we may also find tendencies to ingest abnormal types of substances. Some children are particularly prone to this, putting into their mouths everything that comes within their reach: clay, mud, toys, pins, etc. In psychopathological cases this may be an expression of a desire of the person to hurt himself. It does not necessarily have to be that, however. Most of us are familiar with the "museum-like" contents of the stomachs of some mentally diseased pa-

tients. One finds there sometimes the most extraordinary type and number of things: knives, spoons, pieces of glass, and various other substances that have been ingested. In the most severe forms of mental disease we may find a tendency to ingest excreted material, either their own or that of other people. This is known as *coprophagia*.

(d) Disturbances may also be met with in the manner in which the food is taken through the different passages of the gastro-intestinal tract. One of the most frequent is that of *dysphagia*, or the disturbance in swallowing food. This is most frequently found in cases of organic disease involving the act of swallowing, but even without any signs of organic disease, spasms may occur which interfere with the proper swallowing of the food or may be responsible for a total inability to do so. A similar spasm may occur in the passage from the esophagus into the stomach or from the stomach into the intestine. The former is known as *cardiospasm*, the latter as *pylorospasm*. Here, too, organic disease may be responsible but is not necessarily so. There are numerous cases in which the spasms are of the functional or psychopathological nature. This is also true of the movement of the food through the rest of the intestinal tract where both an increased rapidity of movement or a sluggishness may be responsible for disturbances in digestion.

(e) *Evacuation*. Different types of disturbances may be found in the processes of the evacuation of the excreta. First of all we deal with the occurrences of abnormal interests in the manner in which the process of evacuation takes place. Some patients who consider themselves organically sick will go to great lengths in examining and analyzing the evacuated substances, keeping track of the frequency and nature of the processes of evacuation. In this phase, too, we have to consider the question of increased or decreased frequency of urination and defecation. In a great many cases these depend upon definite organic disease, but they may also be of psychopathological nature. A person who imagines that there is something wrong with his genito-urinary or gastro-intestinal tracts may, in his increased interest in the consistency and nature of the substance evacuated, get into the habit of forcing himself to

produce frequent evacuations. On the other hand, on a similar basis we may have the development of a decreased frequency in which the person will actually hold back the excreta. Cases of psychopathologically conditioned retention of urine for as long as forty-eight hours, or retention of feces for as long as a week are known. With the gradual development of these habits we may have secondary distention of the bladder or rectum and all forms of subsequent organic disturbances may follow.

In some cases we find disturbances in the ability to control evacuations, where we speak of *incontinence*. In early infancy this control is not developed and the infant will allow the excreta to be evacuated whenever he desires to do so. As the infant develops the control is gradually established, but it may fail to develop until a late date or, having developed, it may break down later in life. In a large number of cases this is conditioned by organic disease of the sphincters themselves or of the nervous control of these. In others, however, it may develop on the basis of psychopathological conditions. It is particularly frequent in relation to urination, and is spoken of as *enuresis* (bed wetting). This is more frequent in children than in adults and more frequent at night than in the daytime, but it may occur under different conditions and sometimes may present a very serious problem.

Another form of disturbance to be considered here is the phenomenon of vomiting, which is the forcible expulsion of ingested material through the esophagus from the stomach or, sometimes, from the lower parts of the gastro-intestinal tract. Here, too, this condition is due frequently to organic disease but may develop on the basis of psychopathological reactions. In children especially, this act seems to present little difficulty and may be dependent on various emotional disturbances or dissatisfaction with the food ingested. It is also a familiar occurrence in cases of pregnancy. Whether or not in its very earliest stage, the vomiting of pregnancy is altogether due to psychological mechanisms, and whether similar mechanisms may be responsible for the so-called "pernicious" vomiting which continues into the later months of pregnancy is still a debatable question. It is quite certain, however, that in a large

number of cases the psychological mechanisms, even when not altogether responsible for this type of vomiting, are at least responsible to a large extent. Vomiting of a psychopathological nature may also be found in mentally diseased adults where none of the above reasons can be found, and where the mechanism is dependent purely upon some emotional conflict. Such people continue to vomit most of the food that they take and for this reason lose a great deal of weight and strength.

(f) *Assimilation of food.* The taking-up of the food from the intestinal tract and its utilization either for purposes of energy production or for storing up, may also be disturbed in certain psychopathological cases. Abnormal loss or gain of weight may result and, although in a large number of cases this is due to definite organic disease, it may in some cases be dependent upon psychopathological conditions. In this regard, too, we must emphasize the abnormal reactions to the ingestion and assimilation of certain types of food (idiosyncrasies). Certain people have a tendency to react in what is known as *allergic* manner to special types of food, developing various forms of physiological disturbances such as rashes, respiratory distress, and so on. It is not a definitely established fact whether these are altogether due to organic or to psychopathological causes. It is, however, justifiable to assume that at least a large proportion of these conditions, such as hay fever, asthma, allergic rashes, and so on, may be partly conditioned by psychopathological mechanisms.

Disturbances in Sexual Expressions

In taking up the discussion of these phenomena, we wish to emphasize again the fact that we do not intend to discuss here those phases of the sexual life which deal with the feelings or attitudes toward sex, or the importance of sexual factors or conflicts in the development or causation of psychopathological reactions. These will be considered later. At present we are mainly concerned with the different types of disturbances that may occur in the actual gratification of the sex urge and those that are distinctly observable as such. We may group these

disturbances under two headings: (1) Disturbances in the degree of activities, (2) Qualitative changes.

(1) *Disturbances in degree.* Here we deal first of all with the frequency of indulgence in sexual activities. In some persons we find a tendency towards an increase in this frequency. In men such an apparently increased sexual drive is spoken of as *satyriasis*. In women we refer to it under the term of *nymphomania*. Contrasted with this is the apparent decrease in the intensity of the sexual drive with a concomitant decreased frequency. In men, where the part played in the sexual act is of a more active form, we speak in such cases in terms of different degrees of *impotence*. This may refer to the lack of desire for frequent relations but with the preservation of the ability to perform the act at certain intervals; it may, however, refer to a total inability to carry through the act. In women, where the part played in the act is more passive in nature, we speak of it under the term of *frigidity*. Here, too, it may, and more commonly does, refer to the comparatively infrequent desire for sex relation. It may, however, refer to the actual inability of experiencing an orgasm during the act.

We have qualified the designation of increase or decrease of the sexual drive by the term *apparent*. It is important to remember that an increase in the frequency of the desire for sexual relations may be only apparent, and under the surface it may be related to an actual decrease or a feeling of decrease in sexual power, and because of that a consistent dwelling upon the matter and subsequently a persistent attempt at proving the opposite results. The Don Juan type of man most probably is representative of such a fundamental feeling of inferiority with a compensatory apparent promiscuity. Similar conditions are found in women. The decrease, too, may only be apparent. Here we are not as yet concerned with the question of compensation or substitution, of a subconscious nature, but we actually refer to conditions where the person is aware of the fact that what appears to others as an increased drive is really conditioned by a feeling of decrease in vigor. It must also be remembered that in some cases, although not as frequently as one may think, these quantitative variations may be due to

organic causes. They are, however, largely dependent upon psychopathological mechanisms. The quantitative deviations may also be found in regard to the nature of the sexual act itself. Thus we may have the increased rapidity with which the act comes to a climax. Where the unfortunate condition of marked differences in the speed with which the climax of the act is reached is found in husband and wife, various complications will arise. There may also be certain painful reactions, especially on the part of the woman. These may be conditioned by mechanical differences but may also be due to psychopathologically conditioned spasms (*dysparunia*).

(2) *Qualitative changes*. In a great many psychopathological cases we find disturbances, not only in the degree of activities, but in the qualitative aspects of this function. In discussing these we must remember first of all that the normal heterosexual form of gratification that is found in most adult people is not a condition that develops without any preliminary stages. In its development the human being goes through various other stages before it reaches that of the heterosexual. The earlier stages represent steps in this development and, although if continued into adult life they may be considered as abnormal, they are nevertheless normal when they occur at the proper age. This consideration is important because when we discuss the different types of sexual perversions, we have to differentiate those which represent these earlier stages and are only abnormal in that they appear at an improper stage in the human development, from those which are actually abnormal in that they do not at any time occur in normal individuals. The sexual instinct develops gradually, beginning in early life until the end of adolescence, going through a series of stages that differ in the nature, object and method of gratification. Although the concept of such a development is fairly commonly accepted now, there is still some dispute as to the manner of this development.

The psychoanalytic school offers, probably, the most systematic, even though not universally accepted, theory of this development along the following lines: ¹ In the early days of infancy and childhood we find the so-called *narcissistic* stage

wherein the individual has his sexual urges turned upon himself. As the child develops and begins to take notice of certain parts of his body and comes to differentiate between those that may supply him with pleasurable sensations and others that do not, he goes through a series of stages, during which his sexual gratification is obtained from special parts of his body. Thus we have the stage when such gratification is obtained from the ingestion of food through the *nursing* period, and this is known as the *oral* stage. Then there is the more or less concomitant stage of gratification through the *anal* and *urethral* stimulations. As the child develops, the genital parts of his body begin to attract his attention as manipulation of these organs seems to present the first appearances of actual sexual gratification. This leads at that time to experimentation in this way of manipulating these organs, and with the obtaining of gratification establishes the stage of *masturbation*. The first manifestation of this type of gratification is considered to take place about the age of five or six or even before. Following that, and up to the age of puberty, there is a number of years during which the sexual activity is in a quiescent state. During this stage the child may or may not develop attachments to other persons, but as he grows up and the first signs of puberty begin to appear the interest is again attracted towards the genital zone. With that, there occur two possible forms of gratification. On the one hand the return of interest to the genital zone may bring with it a second stage of masturbation which is very frequent at this period of development. On the other hand the interest in this zone, combined with a *prodromal* stage of shyness and diffidence in the presence of the opposite sex, may at this stage, when the person begins to reach out for objects of gratification outside of himself, cause a divergence of interests toward members of the same sex. It is at this time that the so-called puberty and adolescent "crushes" upon members of the same sex occur and although actual homosexual activities do not very frequently occur on this basis, the interests and attachments to members of the same sex may be considered as being closely related to homosexuality. With the further development of the physical and psychic makeup the person then

passes through the stage of adolescence and gradually concentrates his sexual interests upon the opposite sex, which leads to the taking up of activities and responsibilities of heterosexual life.

Each of these stages that have been discussed in the normal development of the individual may be continued into, or revived in later life, and thus take predominance over the normal heterosexual form of gratification. Thus we may have the continuation of masturbation into adult life. Then we may have the phenomenon of *uranism* or *homosexuality* in which persons remain permanently interested in members of their own sex rather than the opposite one. Different forms of gratification in this fashion are found, ranging anywhere from the mere interests and attachments to members of the same sex to the actual attempt to perform sexual relations in a manner more or less akin to the heterosexual. Similarly we may find that persons adhere to the oral or anal form of sexual gratifications and thus do not reach the mature form of sexual activity. In some cases, and still related to the normal stages of development, we have the interests of mature persons in young children where we speak of *pedophilia*, or the search of young people for gratification with older individuals, which is known as *gerontophilia*.

In addition to these fixations on earlier forms of sex gratification we may have such that are not normally found in any stage during the development of the individual. Of these we might mention first the condition known as *bestiality*, where sexual gratification is obtained from relations with animals. Then we find the condition known as *fetichism* in which case certain objects other than human beings are endowed with potentialities of sexual pleasure. Various articles of clothing, dolls, and numerous other objects may serve to excite sexual interest or even produce orgasms. Normally, too, there is a certain amount of gratification in connection with such objects. A person in love with someone of the opposite sex may be pleased or even excited by an object belonging to that person. This object, however, only serves to represent this other individual and actual sexual gratification cannot be obtained from it.

Where the person to whom this object belongs becomes an unnecessary factor in the situation, and the object in itself serves as a source of complete gratification, we speak of *fetichism*. Other types of perversion which are found fairly frequently are those spoken of under the terms *sadism* and *masochism*. *Sadism* is the gratification of the sex instinct by hurting the individual with whom the sex relations are undertaken. *Masochism* is the gratification from being hurt by the object of sexual gratification. Even normally we find that a certain degree of sadism is found, especially in men, and masochism in women. They, however, serve only as preliminary or auxiliary means and not as ends in themselves. As perversions they tend in themselves to provide sexual gratification without the need of further indulgence in actual sexual relations. This, of course, is also true of practically all the different forms of perversions in that to a certain degree they are present in a great many normal individuals and serve as auxiliary means of gratification but not as ends in themselves.

Chapter XI

DISTURBANCES MANIFESTED IN COMPLEX ACTS

THE REACTION of an individual in response to a given situation can never be considered as an isolated phenomenon. The disturbances in expression, as we have considered them up until now in the form of special phenomena belonging to different fields of behavior, have only been dealt with in that way for the sake of clearer presentation. Their division into elements should be considered as purely arbitrary and useful only inasmuch as the observation of these phenomena is concerned. Actually they take place in association with other activities that enter into the formation of the whole act, and can only be understood when the whole manner of expression is considered and all the phenomena occurring at the particular time can be appreciated. In most acts of response, however, we can usually see a fairly clear line of demarcation between the different phenomena, even though it may be an artificial one. A person who is highly irritable, whose reception of stimuli from the outside is markedly speeded up, may at the same time show a pronounced increase of associative processes and exaggerated push of speech; he may be pacing around the room, picking up things about him in a rapid fashion and going through numerous other activities. It is true that all of these activities are very closely interrelated, both in the manner in which they are produced and in their subjective meaning. Nevertheless, as we watch this individual we can record in terms of observable facts each one of the various components of the person's behavior, and then present the whole picture in terms of the sum of all these components.

However, we sometimes find certain forms of activities in

which a complex act emerges in response to a situation without it being possible or, for that matter, advisable to break it up into a number of elements. This act, although it may manifest a number of physically discernible components, seems to present itself to us as one single event, psychologically irreducible to further elements. It is quite probable that in most cases our inability to reduce such an act to its elements may be due to our incomplete understanding of it. It may, however, also happen that the whole of the act may emerge in its entirety from a level in the personality that is beyond the reach of ordinary observation and because of that defy our attempts at logical analysis. Whatever its causes and mechanisms, it impresses us as we observe its occurrence, as a closed, indivisible entity, and we can speak of such an expression in terms of a *complex act*. Depending upon the nature of these acts and the manner in which the rest of the behavior of the individual is related to them, we can divide them into three groups:

Compulsive Acts

Under this heading we group a series of acts that are performed by the person in such a way that he is conscious of carrying them out and at the same time is aware of the compulsion to do so. They may occur in the behavior of normal individuals but attain more extreme forms in certain types of mental disease. Within normal limits we find them in the form of certain habits. Most people are at times aware of being compelled, by force of habit, to carry out various acts in a certain set form. A great many persons, for instance, know that in order to go to sleep they have to assume a certain posture. The curling up of an arm under the head, of lying on one side or another, holding the legs in a certain position, and numerous other details have to be undertaken in order to create the optimum conditions for falling asleep. Under normal circumstances the person may not be aware of the fact that he is compelled to do these things. Where something happens, however, that makes it impossible to carry out the particular set form, the person will be aware of being compelled by some force within

him to take the position to which he has been accustomed. If the person, for instance, because of some disease is unable to sleep in a particular position, he will find himself continually wanting to assume that position and not being able to go to sleep unless he can. This applies to other things as well. In eating we become accustomed to having the forks and spoons placed in a certain way, and when something happens to disturb the routine we find ourselves subjected to compulsions of reaching out for things where they are supposed to be and not being comfortable in carrying out the act because of the disturbances of the routine.

As we recede towards the periphery of normal limits and go into the psychopathological types of reactions, we gradually come into the regions of more complicated and more serious forms of compulsive acts which affect our behavior in a more decided fashion. These become more obscure in their meaning and manner of development and cannot be easily explained, either by the individual himself or by those observing him, on the basis of simple habit formation. Thus we have the compulsions of carrying out certain ceremonials. A person walking along the street may have the compulsive tendency to walk around certain objects either once or several times, to count such things as telegraph poles or sections of the sidewalk, to start out with one or the other foot first, and to count steps as one mounts a staircase. These frequently appear absurd to the person who carries them out as well as to the observer. No reason can be found on the surface for doing these things, and yet one is aware of the necessity of carrying out that act. As we proceed further into the field of psychopathology we find much more complicated acts that present themselves not only in the form of incidental ceremonials, but are carried out in the form of complete acts. They take on obsessive characteristics, the person being aware of having to go through with a certain act regardless of how absurd or even injurious he may know it to be.

Thus a person may show the phenomenon of *kleptomania*, that is, the compulsion to take things that do not belong to him. It is true that in a number of cases the stealing is performed

in a perfectly rational and wilful manner. The person, in order to save himself from punishment, may claim that he has been compelled to do so without knowing why he did it. There are, however, numerous cases where this performance is carried out in a definitely compulsive fashion. This inability to understand the reason for the act may go to the extreme of the person actually taking things for which he has no need and does not even intend to keep. A rich woman, when going into a store, may be suddenly aware of the compulsion to take an article lying on the counter, which she may not have any use for or may be perfectly capable of buying without any sacrifice. She may even throw it away after she has walked out of the store. At the time the act is performed, however, it takes place under a sudden compulsion which neither she nor those that observe the act can possibly explain.

One patient showing this form of behavior developed the compulsion of stealing violins. He had several violins of his own and if he had wanted others he had enough money to pay for them. Furthermore, the very manner in which he carried out the whole act was a strange one. He would take a violin, walk out of the store, and when he reached a place where he was not observed he would break it up and bury the pieces in the ground. It is true that on analysis various factors were discovered that served as the unconscious determinants of this behavior. These, however, were not, at the time, appreciated by the person nor were they observable to the outsider.

Numerous other types of compulsive acts may be found. Thus we have the phenomenon called *oniomania*, which is the compulsion to buy things. Here, too, it is not a matter of the person wanting to collect certain objects and buying them in an extravagant fashion. The true oniomaniacs will buy things that they may not need as far as they themselves or other people know, may not even use them, or as far as one can see, get any pleasure out of them unless it is the mere satisfaction of having bought them. *Pyromania* is the compulsion to burn things. The person seems to derive satisfaction from the fact that he has set fire to houses or other objects. Such a person

may not particularly enjoy watching a fire. In one case a patient set fire to four different buildings in different parts of the town, and then hid away without waiting to see what happened. *Porionomania* or *wanderlust* are terms applied to the compulsion to move from one place to another. Such a person finds it impossible to stay in any particular place for any length of time. He is a compulsive nomad who goes around from place to place, not because he does not enjoy the particular places to which he comes or even because he wants to see new things. After having been in a certain place for a certain length of time, possibly having undertaken all manner of systematic attempts to adjust himself and even having succeeded in that to a point where he really enjoys living in the particular place, he suddenly becomes aware of a compulsive tendency to move on. Another form of compulsive phenomenon is that of collecting things. This may be related to some particular line of objects such as collecting antiques, stones, coins, and so on, but in the distinctly psychopathological types of reactions we find this compulsion in the form of collecting apparently useless and unrelated objects. In the pockets and rooms of some of these patients we may find all kinds of things that they have picked up, varying from newspaper clippings to pieces of broken pottery. Every time the person comes into contact with a new object he has the compulsion of adding it to his collection.

The presence itself of compulsive tendencies in the form of the experience of being compelled, regardless of the actual carrying-out of the act, is known as *obsession*, and will be discussed later in the section on Experience. In a number of cases these compulsions may lead to severe interference in adjustment, especially if the acts involved are dangerous, either to the person himself or to the outside. Self-mutilation in the form of scratching, biting, and picking of the skin, are compulsory activities that are frequently found in certain types of mental disease.

In this connection we must touch upon a problem of vast importance and which may be the result of a variance of causes, viz., that of *suicide*. There are, of course, different forms of this type of behavior. We do not in this section refer to the

suicide undertaken with some special reason in mind. A person who finds himself in a difficult situation from which he sees no other escape but death, may reason it out logically and come to the conclusion that the best thing to do is to commit suicide. We may also meet with this problem in persons suffering from a definitely fatal disease, where the knowledge that the life span is limited and that nothing but suffering and pain will result from living on through the few weeks or months which are left, may lead to suicide. There are, however, certain forms of suicide that are definitely compulsive in nature. In the case of one patient who had previously shown compulsive tendencies for self-mutilation, several attempts at suicide were observed. The person did not seem to be particularly depressed, did not have any special reasons that he could give for wanting to commit suicide, and yet whenever left alone or believing himself to be alone he immediately proceeded toward blind, unreasoning attempts to end his life. In between these attempts he ate and drank and otherwise took fairly good care of himself, but periodically the compulsion to commit suicide became manifest.

In all of these forms of compulsive activity we may find definite, logically appreciable reasons for such activity that can be obtained through an analysis of the deeper levels of the personality. Even in such cases these reasons remain unknown both to the person himself and to those around him, unless a successful analysis has been undertaken. In a number of cases, however, possibly because of our inability to gain real insight into these levels, or because such reasons may really not exist, the mechanisms of the compulsion remain unknown. Compulsive acts may also occur in some organic diseases where certain parts of the brain are affected, which cause compulsive movements of special organs. To this type belong the so-called *oculogyric crises* wherein every now and then the individual is conscious of having to move his eyes to one side or another, upwards and downwards. The person knows that there is no reason for doing this but he is simply compelled to do so. This may also affect other organs in the body. In the carrying out of these compulsive acts we must distinguish the concomitant

objective experiences that take place. In some cases the person is aware of the compulsion and also knows that this compulsion comes from within him. In other cases he may have the belief that somebody in the outside is compelling him to do so, either in the form of influencing his thoughts or in the form of actual command by the spoken word. These factors will be further discussed in the section on Experience.

Automatic Acts

We deal here with a series of performances in which the person may go through the most complicated forms of activity in a certain systematic way, but, in contradistinction to compulsive acts, without the consciousness of being compelled to do so, even when he is not aware of any conscious planning or intention or often even of having performed the act at all. The most commonly occurring forms of this activity are the so-called *reflex acts*. When a dangerous object approaches the eyes or face of the individual, there is an automatic closure of the eyelids. The person does not as far as he knows do it purposely; he is not aware of the compulsion to do so unless his attention is brought to the fact, and, at times, may not even be aware of having done it at all. This is also true of other reflexes, such as the knee or light reflex. They are all types of activities that can be observed to occur under certain set conditions and which even the person himself can follow if his attention is attracted to them. A great many of our habits that take place in a reflex fashion belong to the automatic acts. In the act of walking, for instance, the person may have to go through with definite conscious planning while learning, but once the habit is established, each particular movement that is carried out in the complex act of walking is done automatically. It is the same thing with dancing, playing an instrument, skating, etc.

As we move further towards the periphery of normal and towards the psychopathological, we find more extreme manifestations of this form of activity. In spiritualistic séances or

in trance states persons, either the medium himself or those around him, may find themselves doing certain things, going through with certain activities, talking or moving about in an automatic fashion. In the more pronounced mental aberrations we find such things as automatic writing. The person without being conscious of doing so and certainly without the feeling of being forced to do so, will write if a pencil is placed in his hand, the character of the writing differing as to its legibility or intelligibility in different cases. Interesting observations on this phenomenon were made, especially by some of the French neurologists and psychologists, in cases of automatic writing of hysterical patients.⁴⁸ Under suggestion the patient was capable of writing with a paralyzed arm without knowing that he did so or being aware of the compulsion to do so. In a minor degree we find this type of automatic writing in normal people when it is carried out under circumstances where the person is busily engaged in some other activity. A well-known example of this is the scribbling or drawing carried out by many persons with their free hand when talking over the telephone. The act is carried out without any conscious planning or motivation, but under the surface there may be a great many factors that could explain not only the actual productions but also the reason why they were produced at that particular time. On the surface, however, and especially to the person himself, these mechanisms are not evident.

Automatic speech is another example of this phenomenon. We have already referred to certain things that may be automatically said while the person is in a trance or under the influence of suggestion. We also find other manifestations of this phenomenon. Some mentally diseased patients may, during an interview while they are talking about some specific subject, suddenly stop and for a short period of time talk about something that has nothing to do with the subject and after a while return to the previous theme. They may or may not remember what occurred during the interlude. When their attention is brought to this they will say that they did not know why it occurred and were not aware of any compulsion to do so.

A young girl presenting this type of behavior, while engaged in conversation would suddenly break off, perform some queer movement, accompanied by one or more words that did not have anything to do with the subject discussed, and then go on even to the extent of picking up the fragment of a sentence that was necessary for the conclusion of her thought process, as if nothing had happened in between. When asked about it she denied knowing that anything like that happened and was certainly not aware of having been compelled to do so.

There need not be any loss of consciousness at the time, and the person's attention can be attracted by external stimuli. Furthermore, outside of the particular content of this automatic act the person is aware of what happened around him at that time. During the course of some of the more serious mental diseases we meet with this phenomenon quite frequently. A patient may be sitting quietly on a chair, apparently undisturbed, coöperative, and then suddenly get up and perform some inexplicable form of activity such as smashing a window, hitting someone, and so on. A more or less similar type of activity is noticed in normal people under certain conditions. We meet with peculiar automatic forms of behavior in persons who are wrought up by some emotional state, as, for instance, intense religious experiences. In revival meetings or other religious gatherings, persons will get up and talk sometimes in a strange "tongue," or in their own language, will jump or roll, flog or mutilate themselves, without being able to give any reasons for such activity.

Primitive Acts

Placed between these two different forms of activities and in a certain way related to both of them are the so-called primitive acts. They are forms of activity occurring usually in response to a certain situation in which a short-circuiting takes place between the functions of reception and those of response with an elimination of some or all of the intellectual activities. They differ on the one hand from the compulsive acts in that the person frequently is not aware of the feeling of being com-

pelled to act in the way he does, and that here we miss the lack of relationship that the compulsive act shows in regard to any possible causative factors. The primitive act is very definitely related to the given situation, but it follows it directly without the interposition of a logical analysis between the stimulus and the response that is given. On the other hand, it differs from the automatic acts in that the person is usually conscious of the act itself and, granted certain exigencies, the act is understandable in terms of the situation in which the person is found. The connotation "primitive" is affixed to this type of behavior because it is closely related to the type of behavior one finds in animals, in young children, and in primitive people.

An example of such a response in children can be found in the following conversation with a child: The small boy in question has been subjected to the unpleasant routine of going to bed at seven o'clock. On the particular day when the interview took place, not wanting to go to bed, he asked why he should be made to do so. He was told that this was necessary because it was late, since it was dark outside. After a slight pause the child said: "I wish we had houses without windows. Then we couldn't know it was dark." Thus, in order to deal with the undesirable fact of having to go to bed, he went directly to the heart of the situation, eliminating the facts that mean "bedtime" by doing away with windows. To this type of activity belong the various other forms of responses of children, such as temper tantrums. When the child does not obtain a certain object that he wants, he throws himself on the floor, kicks and cries, and in general shows his direct protests against the situation, but has no appreciation of the lack of logical background to this reaction. We find such reactions also in adults, who, because of a certain type of initial intelligence or of some mental disease, may fail to see the necessity of reasoning before a response is undertaken.

The following case, quoted from Kretschmer,⁵⁷ serves to illustrate this form of behavior: The case is that of a young girl who had lived on a farm all her life and was very much attached to her home surroundings. She was quiet and shy and not particularly robust either physically or mentally. Circumstances forced the patient to

leave her home and secure housework in town. The new surroundings, the strangeness of the city, and the absence of her usual environment made the girl homesick and she could not adjust herself, but it was impossible for her to escape from the unpleasant situation. A few weeks after her arrival she was left alone in the house with the children. When the people returned they found the house afire, the children murdered, and the girl in a state of bewilderment. All that she knew afterwards concerning the situation was that she was brooding about it, felt extremely unhappy, and wanted to leave at all costs. She killed the children and then set fire to the place. In a primitive fashion this was a direct way of dealing with the situation. The children that she was supposed to look after the house that she was supposed to be working in, were the two important factors that kept her away from home. With these gone there would be no further necessity for her staying there and she would be able to return. Her action, however, was a direct response to the situation without the intervening interposition of logical thought concerning the real obstacles in her path or any consideration of the consequences.

We find this type of reaction occurring in a variety of forms. A person of a certain type of intellectual and emotional makeup is present at a trial where a negro is being tried for having assaulted a white woman. He gets emotionally wrought up, is afraid that such occurrences may take place again, and feels the need of dealing with the situation in some way. He leaves the court house in this state of tension and seeing an innocent negro walking down the street he attacks him and is kept from causing serious harm only by outside intervention.

This method of direct but unreasoning response to situations is frequently encountered in the case of groups of individuals who can be aroused by some emotional stimuli to a high state of suggestibility and excitement. A large number of social upheavals and disturbances, revolutions and certain mob reactions of soldiers at war, can be looked upon as belonging to this type of behavior. These reactions may in extreme cases approach the behavior of animals to such an extent that it is difficult to see any distinguishing mark. The so-called *sich-todt-stellen* of animals when in extreme panic may also be seen under certain conditions in persons. When threatened by great danger and unable or unwilling to fight they too may assume

this "pose of death" as a last refuge. We also have the various primitive types of reactions in soldiers when threatened with danger to their lives; some of the so-called shell-shock phenomena, panics, and shaking spells that one observes in these soldiers may originally have been carried out in the nature of a primitive reaction to danger. Subsequently they may be carried on even in the absence of danger but in the nature of habit formation. Certain types of suicide also belong to this form of behavior. Here we deal with people who when faced with a difficult situation, having to adjust themselves to a problem which at first glance does not offer any acceptable solution, will in a short-circuit form of response extricate themselves from this situation by the most direct, even if not most logical, method of killing themselves.

Once more we wish to emphasize that when we speak of the apparent nature of all of these complex acts, we do not mean that there may not be conditions under the surface that explain logically the superficially unintelligible manners of behavior. We are not, however, at present concerned with what the mechanisms of these acts may be and are only describing them as they would appear to an objective observer.

Chapter XII

PSYCHOPATHOLOGICAL DISTURBANCES OF SLEEP^{30,104}

SLEEP IS a phenomenon normally occurring in living organisms and showing, in the normal individual, certain well-known characteristics. It can be regarded as belonging to the field of behavior, since a number of these characteristics can be observed objectively. When we consider the phenomenon of sleep as one of the manifestations of behavior we must remember that it differs from all the other components of behavior that we have discussed until now, in that the sleeping person is in a state that is essentially different from that of the waking person. Both physically and mentally certain activities of the person that are observable in waking life are reduced in their function even though not altogether absent, whereas others may still go on at a different rate and rhythm than that of the waking state. The nature, purpose, mechanisms, causes, and characteristics of normal sleep are matters of study in normal psychology, and it is assumed here that they are known to the student who takes up an investigation of psychopathology. Because of that we shall not go into a detailed discussion of these matters. There are, however, both normally and psychopathologically certain aberrations in all of these characteristics of sleep, which are found under certain conditions and may be related to abnormal activities in waking life. These phenomena will be discussed under the following headings:

Rhythm

Normally, individuals establish definite periods during which sleep takes the place of the waking state. In the ma-

jority of human beings certain hours of the night are habitually utilized for sleeping and the individual develops the habit of going to sleep at such hours. Even normally this is not invariably the case. People whose occupation or interests condition them to stay up most or all of the night, will in time develop a habit of sleeping during the daytime. Even people who sleep at night may develop the habit of taking some of the hours in the daytime to provide for an additional amount of sleep which may be necessary to them. Some people who have not developed the habit of sleeping in the daytime may do so when exhausted by extraordinary mental or physical work, and fatigue of any kind is conducive to sleep regardless of the rhythm in the particular person.

Under certain pathological conditions this rhythm may be radically disturbed and an individual who has previously established a habit of sleeping at night may find that he will have a tendency to fall asleep in the daytime and not be able to sleep at night. This condition, which is termed the *reversal* of the *sleep rhythm*, is frequently found in certain types of inflammatory lesions of the central nervous system. Furthermore, objections to activities which are not of interest to the individual and are more or less monotonous to him, such as listening to a boring lecture or being occupied in an automatically occurring monotonous type of activity, may cause a person to fall asleep even if the hour is not the usual one for such a state. In some psychopathological conditions we find that certain fears and anxieties may interfere with the ability to go to sleep at night. They may keep the person awake all through the night and permit him to sleep only when he feels himself safe in the lightness of day and the activities of people around him.

Quantity

The number of hours of sleep necessary for a particular individual varies under normal conditions within rather narrow limits. Normally the introduction of new factors, such as fatigue, excitement, worry, intense interest in some special subject, may influence the number of hours necessary, as well as

available, for sleep. Here certain psychopathological or organic diseases may introduce wide variations. A person may continue in a state of different depths of sleep during the daytime, even though he has had the necessary amount of sleep at night. This may occur either in the form of short periods or a continuous state of drowsiness or *somnolence*. In organic disease affecting certain parts of the brain, particularly in cases of tumors of the midbrain, we may have a continuous state of *somnolence* all through the day. The ease with which the person is aroused from this sleep and with which he can stay awake after he has been aroused, varies with different types of diseases. Where this type of sleep during the daytime increases in depth, we speak of *sopor*. If it is still more pronounced, we speak of *torpor*, and finally of *coma* or unconsciousness where the person is not only in a state of sleep but where none of the ordinary types of stimuli can bring him out of this state. There may also be a decrease in the number of hours of sleep. We speak here of *insomnia*. This may refer only to the inability of going to sleep or continuing in the state of sleep at night. In some cases of mental disease, however, the state of receptivity or irritability may for one reason or another be so exaggerated that the person cannot sleep at all or can only sleep in short snatches. In between these he may be somewhat hazy and dazed, or he may be over-active. When these two are combined we have, as a result, serious interference with the health of the individual leading to complete exhaustion.

Disturbances may also be found in the depth of sleep. Normally this depth varies through the different hours of sleep. Different curves may be established for a given individual, or even for the large group of so-called normal persons, beginning with a light form of sleep, going over gradually to reach the maximum depth and then returning through stages of decreased depth to the waking state. In normal individuals this may vary, some people showing the same curve but never reaching the same depth as the average person, others varying in the duration of the different stages, etc. In some cases the curve itself may vary from the normal especially in cases of people who wake up often during the night and then go to

sleep again, and these variations may reach further extremes in some forms of mental diseases.

The Passages Between the States of Waking and Sleep

Under normal conditions the average individual requires certain conditions under which he goes to sleep, such as the lessening of outside stimuli, a certain amount of fatigue and the proper time, as established by habit. Under such conditions the person will require a certain length of time, varying with different individuals, during which he falls asleep. Similar characteristics are found in the process of waking out of sleep. Variations of these characteristics may occur under different conditions and in different individuals. Some persons, when the time comes to go to sleep, will drop off suddenly into a deep sleep. Others may have a great deal of difficulty in going to sleep. The proverbial "sheep counting" or the utilization of more powerful sleep-inducing methods, such as drugs, etc., have to be resorted to sometimes. Quite frequently the person who, because of some pathological condition, has for a long time been unable to go to sleep in a normal way and has had to use drugs or other means of inducing sleep, may develop a habit for these inducements even if the pathological condition has disappeared. We find the same variations in the ease with which the person wakes out of sleep. A person in danger, for instance, will sleep very lightly and wake up at the least stimulus. Others may develop the ability to wake up easily under the effect of certain stimuli and not of others, psychic as well as physical. The peculiar ability of a great many people to wake up exactly at a certain time when it is necessary for them to do so, is also of significance in this connection. Still another aspect of this phenomenon is the difference in the ease with which different persons can be awakened, some waking at the slightest stimulus, others requiring very vigorous efforts to bring them out of their sleep. In certain cases of organic or psychopathological conditions we may find exaggerations of these characteristics.

The act of awakening usually takes place in such a way that the person becomes able to move physically at the same time

that he becomes aware consciously of what is going on about him. In other words, the psychic and physical awakening are more or less simultaneous. In some diseases either organic or psychopathological we may find the phenomenon known as *cataplexie du reveil*.⁹³ This phenomenon is characterized by a psychic awakening which takes place before the physical one. Under such conditions the person is more or less clearly conscious of what is going on about him, but cannot move voluntarily for a greater or lesser period of time. In psychopathological conditions this period of cataplexy may continue for several minutes, the person undergoing a great deal of mental torture because with his clear consciousness he is yet unable to reach physical awakening.

Content

During the state of sleep when certain activities of the individual are reduced to a minimum, there still remains a certain number of other activities that continue to be active even in the normal individual. The function of the circulation of the blood, the heartbeat, the functions of respiration, gastrointestinal, and various other physical activities continue even if their rate or intensity may be different from that of the person when awake. Other physical activities such as an occasional turning from one side to the other, a certain amount of restlessness and tossing about, may be noticed even in normal individuals. Different persons, too, will assume a certain position or series of positions in their sleep. In addition to these there is evidence of some mental activity during the state of sleep. We have various, even if indirect, indications of such functions. Thus certain observations point to the fact that some function akin to conscious thinking may be active during sleep. A person who is engaged in the search for a solution of some problem may go to sleep without being able to solve it and wake up in the morning with the sudden realization of having found the solution.

Another evidence of the occurrence of some form of mental activity during sleep is the practically universal phenomenon of

dreaming. The psychology of dreams, their relationship to certain functions in waking life, their importance in giving us an insight into the mechanisms of a great many other activities, their relationship to psychopathological phenomena in general, and especially the clues that dreams may give us in the discovery of mechanisms of mental disease, are all of the greatest importance to the student of psychology. The whole investigation of dream psychology has been given a special impetus by the contribution of the psychoanalytic school. Since the psychoanalytic theory started out in the field of psychopathology and has had its main interest in this field, most people seem to think of dreams and dream psychology as belonging exclusively to the field of psychopathology. Dreams, however, are really phenomena of normal mental activity and as such will not be discussed in detail here. The value of dream analysis in the determination of the mechanisms of mental disease is very closely related to psychopathology, but it will be discussed from that point of view in the section dealing with mechanisms and causes of mental diseases, especially in relationship to the presentation of the psychoanalytic theory. At present we wish to discuss mainly certain occurrences in dream life that can be regarded as phenomena of mental disease.

We find here, first of all, certain unusual types of dreams that produce a particularly profound effect upon the person. Extremely unpleasant or terrifying dreams frequently occur in cases of organic or psychopathological disturbances. We find, for instance, panicky dreams occurring in people with heart disease or persons who suffer from anxiety neuroses or other types of mental disease that are associated with increased psychic tension. A person will wake up from such a dream in a state of panic, his heart beating fast, his body bathed in perspiration, and with a sinking feeling of impending catastrophe. Persons that suffer with delusional beliefs of being persecuted by others or being subjected to certain forms of torture may have similar experiences occur in their dreams, sometimes in such a manner that one is actually incapable of deciding where the dream left off and the delusion started. A dream terrifying even to a normal person, but especially so to one suffering

from a mental disease, may be so vivid that the person on waking cannot convince himself that it was not a real experience (nightmare, *pavor nocturnus*).

Other activities not usually found in normal sleep may be observed in certain individuals. Talking while asleep is a fairly common occurrence even within normal limits, but may occur in cases of mental disease where previously it was not present. Sleep walking or *somnambulism* is another phenomenon that is sometimes, though rarely, observed in normal persons, but is more frequently found in cases of mental disease. During this state, not only may the person walk around but he may even carry out certain complicated forms of activities without being conscious of the fact. In certain cases of mental disease, especially in the more serious forms, we may find a great deal of difficulty in differentiating experiences that the person has had during the sleep from those that he believes to have happened during his waking period. This is of especial importance in cases of persons who suffer from sense deceptions. Even in normal persons the stage which intervenes between waking and sleeping, either at a time when a person goes to sleep or just before he wakes up, may be replete with imaginary experiences, where he may hear or see things which do not actually occur (*hypnagogic hallucinations*). In those cases of mental disease where these states are not clearly differentiated, the persons may go from a state of dreaming to a state of actual *hallucinations* without noticing the difference and without our own ability to be perfectly clear as to whether a voice that they heard or an object that they saw was experienced during the state of sleep or after they were completely awake.

Form

All of the above characteristics described under the different groups combine in the normal individual to lend a certain set form to the normal state of sleep. This form as a whole may undergo a series of variations under certain abnormal conditions. We may deal then with sleep either comparable to the normal state or varying from it, but occurring in some special

form. Some of the more important of these deviations in form are as follows:

(1) *Narcolepsy*. This is a condition in which the persons go to sleep under adequate or inadequate circumstances, either without any special reason that one can see, or following some emotional disturbances. The sleep in itself may be of normal content and continue through a greater or lesser period of time. In those cases where the narcoleptic attacks are associated with some emotional stimuli, we find that some amusing or saddening occurrence will cause a sudden feeling of weakening, relaxation, and then a dropping off to sleep. Such persons for instance will fall asleep when someone tells them a particularly amusing joke or when they themselves talk about something funny. They may also react in the same way when they are subjected to stimuli that call forth feelings of sadness, pity, compassion, and so on. A somewhat related form is that of *pyknolepsy*, where very frequent spells of sleep of short duration take place during the daytime without any apparent cause. These have been noted to occur in cases suffering from some organic disease of the central nervous system but have also been observed without any signs of such disease.

(2) *Absence*. These are periodically occurring states simulating sleep, but really of the nature of unconsciousness, which are particularly common in patients suffering from epilepsy and known under the name of *absence* or *petit mal* (to distinguish it from the *grand mal* which is a more severe form of epileptic seizure, accompanied by convulsions). Phenomena of this type are of short duration, and the person may show them even while engaged in work. There may be just a flicker of unconsciousness during which the person remains as if frozen in whatever work he was doing at the time, and then comes out of it, without knowing what has happened, to pick up the work where he has left it off. In the more severe cases a certain amount of confusion or haziness may follow the spell itself.

(3) *Hypnosis*.^{41, 94} This is a special form of sleep which is produced through the medium of suggestion. The person is induced to go into a state of sleep by the influence of the hypnotiseur and during this state he will retain all the characteristics

of sleep as far as all other stimuli around him are concerned, but will be open to reception of stimuli from the person who induced the sleep. Under the commands of the latter he may talk, walk around, carry out complicated orders, and yet not be aware of having done so. Following the state of sleep, after he has been awakened by the order of the hypnotiseur, he will not, in most cases, remember what has happened during the period of sleep. When in this state the person is usually very easily influenced by suggestions coming from the hypnotiseur. Various sensations or states of mind can be suggested away during hypnosis and, furthermore, the person may be induced to carry out the so-called *post-hypnotic* orders. By this is meant that if during the state of hypnosis the suggestion is made that after the person wakes up he will carry out a certain command at a certain time, the person does so in an automatic fashion, without any conscious knowledge of reasons for his action.

Chapter XIII

**DISTURBANCES IN THE GENERAL
ATTITUDES***Concerning Experience*

IN DIVIDING the various phenomena of mental activity, normal as well as abnormal, into the two broad groups of behavior and experience, we have at the outset emphasized the fact that the division is really arbitrary, undertaken only for the sake of facilitating its systematic presentation, and not because such a division actually exists in nature. We must regard any manifestation of mental activity not as consisting of different components, but as a whole which may appear to the investigator as having two aspects: one represented by objectively observable behavior, and the other in the form of subjective experience. It is only with this in mind that we can deal with the phenomena of experience individually, as separated from those of behavior. We must also bear in mind that, although very few behavior phenomena occur without a parallel experience for the individual and very few experiences take place without some observable change in behavior, nevertheless the various phenomena as we investigate them may show predominantly either the one or the other. This is especially true of experience in that we all know that it is possible, especially for some individuals, to go through an experience without showing any changes distinctly observable to the outside. One person may feel elated or depressed and yet show very little of it to the outside observer, whereas another may express in his behavior manifestations which are directly opposed to that which actu-

ally goes on within him. It is because of this that as long as we remember that we are not regarding this division as an absolute one, it is of great advantage in a systematic presentation to deal with experience apart from behavior.

We must also remember that the attitude of the investigator himself must change to a certain extent when he passes from the analysis of behavior to that of experience. In behavior we deal with something that can be more or less independently observed and recorded by the outside. The person who is being studied is looked upon as something outside of us, as an objective entity in whom changes that he presents to the outside are to be recorded regardless of their meaning or interpretation. When we begin to investigate experience, although we still keep our objective attitude in that we do not allow our own prejudices or feelings to color that which we assume to be going on within the individual, nevertheless, in recording the various experiences, we have to identify ourselves with the patient and see the outside as it appears to him. It is a much more difficult field with which to deal. The means of transmission of experiences from one person to another are necessarily those of speech, writing, and other forms of communication. At best these are only symbols and not direct forms of transmission. When the person tells us that he feels gay or unhappy, that he hates or loves, he does not actually transmit to us the whole state of feeling that he experiences, but gives us an indication in the form of a symbol, which we must interpret by the application of this symbol to our own experiences. When the person gives us the key word, *gay*, we think of the reactions of other people when they said they were gay and, what is more important, we think of all that we ourselves associate with the word "gay" in its meaning to us. That is as far as we can go in the recording of observations in the field of experience. Knowing as we do that individuals vary to a marked extent as regards their behavior, their thinking processes, their manner of solving certain problems or responding to certain situations, we can assume that they probably vary a good deal in their actual experiences also. What one person experiences in the state of "gayness" may be entirely different from that

which we ourselves experience. Nevertheless a certain amount of similarity does exist as is shown by the common characteristics in the behavior of persons and their adjustment when they are said to undergo certain experiences. We can utilize to great advantage even this somewhat imperfect form of investigation.

The field of human experience contains a vast number of possibilities. To enumerate them all or even to present an all-inclusive list of categories would be difficult, if not impossible. Fortunately for our own purpose we do not need to do that because our interests do not so much demand the presentation of all possible human experiences, as the consideration of those lines along which the pathological adjustment may condition special states of experience. It is from this point of view that we would like to present the psychopathological phenomenology of experience under the following groups: (1) disturbances in the general attitude, (2) disturbances in the subjective components of reception, (3) disturbances in evaluation.

We approach the field of experience as we did in the case of behavior by considering the state of the whole individual as he faces a situation. In discussing behavior we were considering the individual as facing us, and before we went into the different components of his behavior we considered those features that were characteristic of behavior activities in general. It was only after that that we went on to the more detailed but also more artificial analysis of the whole behavior into its various components. In investigating that aspect of mental activity which we call experience, we have to change our tactics in that we have to place ourselves on the inside of the individual and appreciate what is going on within him when he is faced by the outside. In other words, we will start with the discussion of the attitude that he takes as a whole person to the situation. But even within that we have to undertake certain subdivisions dependent upon whether the individual's attitude, as such, includes the whole situation, with its objective as well as subjective components, or whether this attitude is particularly directed towards the environment or toward himself. We will, therefore, take up first of all:

Disturbances in Attitude to the Situation

In approaching the consideration of the phenomena in this field, we cannot use quantitative measures as standards of comparison. The variation here must be determined on the basis of certain values which the contents of the situation have for the individual. We can conceive here of three main groups: a) the situation may be acceptable to the person and he is satisfied with it; b) it is unacceptable and the person is dissatisfied with it; c) the situation leaves the person indifferent. Even in the normal individual we find that the attitude does not always remain the same. Some situations may be highly acceptable, others just as highly unsatisfactory, and the rest present a series of gradations between the two. Even within the same situation the person may fluctuate between being satisfied and dissatisfied with its progress. Furthermore, within the same situation and at the same time, there may be certain features that are acceptable and others that are not. Usually we deal with a state of equilibrium with occasional predominances of either the one or the other. The average person, therefore, as he goes through life, presents a fairly well-balanced mixture of both acceptance and dissatisfaction, neither of them going outside certain limits and the pendulum swinging to and fro with greater or lesser amplitude either towards the one side, or the other. As we begin to approach the periphery of normal mental activity either in regard to certain types of individuals, or in regard to extraordinary circumstances in a given situation, we find the following deviations:

a) *Acceptance*. A person may be particularly well pleased with his situation and present a high degree of acceptance to it. Under such circumstances we speak of the person as being cheerful, optimistic, gay, or happy. This may be temporary and in response to actually acceptable characteristics of the situation as we find it quite frequently in the case of most normal persons when their activities in terms of adjustment have met with high success. Outside of average limits the attitude of acceptance may become exaggerated either on the basis of a

special characteristic of a given person whose makeup is such that he is more ready to see the happy side of life, or it may be due to temporarily occurring disturbances in the person's critique and ability to evaluate things, wherein for a certain period of time he sees all features in the situation as highly acceptable even if they are not actually so. As we move further into the psychopathological we meet with more pronounced exaggerations of this attitude of acceptance of the situation. A person may then be described as *euphoric* when everything occurring in a given situation tends to give him feelings of well-being, satisfaction, exaltation, ecstasy, and so on. In the more serious psychopathological conditions this exaggeration of being pleased with the general situation may go to such extremes that the individual loses most or all of his powers of criticism and discrimination and accepts everything that happens around him with a pronounced degree of approval. Conditions which are actually not quite acceptable and are against the interests of the welfare of either the person or his environment, are falsely perceived with an inordinate sense of optimism that may lead to feelings of increased power, disregard of obstacles, and subsequent errors in judgment and pathological forms of adjustment.

It must be remembered, of course, that certain types of normal persons may for a while, when bolstered up by a series of successfully accomplished enterprises, lose some of their usual critique and in this way reach degrees of unwarranted optimism. In the normal individual, however, the occurrence of several repeated failures will succeed in sobering him and sometimes even render him more cautious and distrustful than usual. Where the state of satisfaction and euphoria continues for a long period of time and in face of repeated evidence of faulty judgment, it should be regarded as pathological. A large number of factors may have to be considered in our evaluation of such conditions and their mechanisms. On the one hand, a person who tends to look at life in a somewhat optimistic way, must, in order to be able to judge things correctly, retain a certain amount of sound critique in his judgment which will compensate for his optimistic tendencies. In some diseases

that lead to deterioration of these powers of discrimination and judgment (which is especially the case in certain types of organic brain disease), the feeling of exaltation and optimism will gain predominance not of itself, but because the person is actually unable to judge the different occurrences in the situation. On the other hand, the pathological processes may be mainly conditioned by an increase in the feeling of optimism itself and then, even if the person is quite alert to some of the unsatisfactory features of the situation, this feeling of optimism is so great that it overrides his better judgment. Finally in a large number of cases the situation develops on the basis of an interaction between the two, where we deal with a decrease of the one supplemented by an increase in the other.

b) *Dissatisfaction*. Here, also, we find widely varying states even in the normal individual. A consistent failure in one's attempts at carrying out certain enterprises, the loss of a very important or very desirable object in the life of the person, and various other discouraging conditions, may lead in most normal individuals to a state of dissatisfaction with the situation. At the beginning, while the dissatisfaction is still acute, this may spread and color other contents which are actually quite acceptable. We then speak of the person as being sad, discouraged, gloomy, or pessimistic. If this lasts for a longer period of time and the future does not seem at the time to hold any compensation for the loss, even a normal person may go into a profound reaction in this direction, and we speak of him as being *depressed*. Normally, however, this state of affairs has a self-limited existence. The person gradually becomes less sensitive to the loss or failure as time goes on, and with the occurrence of a repeated number of encouraging events, the pendulum swings back, sometimes to the other extreme.

If the conditions which have given rise to the development of the depression are not such that would normally cause such an exaggerated reaction, and when this state of depression continues for a long period of time, sometimes even in spite of a change in circumstances for the better, we speak of a pathological *depression*. In distinctly psychopathological states we may find various degrees of intensity of depression. It may

spread to involve all of the activities and interests of the person; things that are of great importance and that offer possibilities of changing the situation may be disregarded. The person may finally lose interest in all things, his activities may diminish in quantity and intensity, he may cease to desire any contact with the outside even to the extent of refusing to eat or look after his personal needs, and in extreme cases may reach such a feeling of futility and hopelessness that he may consider suicide as the only solution.

It can be readily seen that both of these conditions, increased acceptance or dissatisfaction, are changes within the same function, that of the attitude to the situation as a whole. Whether or not they start in relation to some special content, they can be regarded as expressions in general attitude only when they spread to take in all or most contents in a given situation. This function is usually referred to as *mood*, and we speak of swings of mood either to elation or depression, to increased acceptance or dissatisfaction. We do not use this term here in the same sense as it is used in clinical psychiatry, where it is applied in the designation of certain disease entities, the predominant feature of which is that of mood disturbance. These disease processes may and usually do include a large number of other phenomena of behavior and experience. In speaking of mood disturbances from a psychopathological point of view, we will have to remember that the other phenomena, no matter how closely related they may be to the central feature, must be regarded as coincidental and not as belonging to the changes in the general attitude.

c) *Indifference* and *inadequacy* of attitude to the situation. Even in the normal individual we find, under certain circumstances, states of attitude towards a given situation in which the person feels neither particularly satisfied nor dissatisfied with conditions, but somewhere in between these two; that is to say, the person is indifferent. In most normal individuals this feeling of indifference, which on the whole is rather rare, is usually related to conditions which actually are not of great significance to them. Such states, furthermore, are never of long duration, for in most cases some part of the situation will

change in such a way that the person's interests will be aroused toward one or the other form of attitude. As we begin to approach the periphery and pass into the psychopathological states, we begin to find feelings of indifference that occur under conditions which normally would call forth a more positive type of attitude. When this affects the general situation and the person cannot for a considerable period of time be brought from this state of indifference, under circumstances that should elicit attitudes of acceptance or rejection, we speak of *apathy* or lack of mood.

In certain forms of mental diseases we find this kind of reaction developed to a pronounced degree. In such states we do not find, as in the depressions, a lack of interest because of the feeling of hopelessness and futility, but, as far as we can judge, simply a state in which nothing matters. The person does not appear particularly dejected, he does not complain or try to change the situation, even his facial expression is usually bland and colorless. These states, if they continue for a long time and are not influenced by changes in the environment, may lead to serious interference with the ability of the person to take advantage of opportunities offered, and may be responsible for serious disturbances in his adjustment. This does not mean that we are dealing here simply with a loss of mood produced by outside factors, with the patient playing a passive role. On the contrary, the apathy and lack of interest may in themselves be the expression of a certain type of adjustment undertaken by the individual. Where for some reason the situation appears to the individual as admitting of no possible solution, the person may take refuge in the apathy as the only form of adjustment that is possible under the circumstances. It sometimes becomes a question in the minds of those who can envisage all the circumstances that lead to the development of this state as to whether, after all, this may not have been the only possible method of adjustment.

Another type of disturbance in this field is that spoken of as the *ambivalence* of attitudes. A person may at the same time be capable of the feeling of acceptance as well as rejection. The mechanisms of such a state are complicated and will be

discussed in later sections. They do lead to pronounced disturbances in the adjustment of the individual, and when in such a state the person is always torn between the two opposing tendencies, being elated and depressed at the same time. Finally, we may have in this field the pathological phenomenon of *inadequacy* of attitude. In these cases the behavior or statements of the patients convey the impression of an attitude of satisfaction when the conditions are such that one would expect the attitude to be that of dissatisfaction and vice versa. It is in these conditions that we meet with the type of response to which we have already referred under the term inadequate emotional expression. Such a person will laugh when he talks about the loss of someone of whom he was particularly fond, or cry when he talks about an indifferent or even amusing occurrence.

Disturbances in the Attitude to the Environment

The changes in attitude discussed above were those that a person takes to the whole situation, that is to say, the outside as well as himself. In some persons under certain conditions we may find that these disturbances occur mainly in relation to the environment and are not necessarily related to the person himself. When we spoke of cheerfulness or euphoria in terms of changes in the general attitude to the situation, we referred to states wherein the individual not only considers the outside as offering a bright outlook but also has the feeling of being highly satisfied with himself. Where the attitude to oneself remains more or less normal but the difference takes place in relation to the outside alone, then we speak of either exaggerated acceptance or rejection of the environment. We must remember here that the normal person does not always have only one type of attitude to conditions outside himself. Not only does he waver from acceptance to rejection as time goes on, but at any particular time he may, in a given set of conditions or even with reference to a certain content, see some features that are acceptable and others that are to be rejected. On the whole, however, the normal person shows enough of a

mixture of these attitudes to be able to continue with a certain openness of mind in dealing with them. Under abnormal conditions we meet with the following possibilities:

(1) *Acceptance of the environment.* In addition to the feeling of satisfaction with the environment that one may develop on the basis of adequate reasons, we find manifestations of an exaggerated acceptance of all or some of the contents in the environment without any justification for it. Such phenomena as over-confidence in the abilities of certain individuals, exaggerated amount of trust placed in them, or tendencies for the search of approval and assurance on the part of all or some of our fellow-beings, are fairly frequently met with even in normal persons. Sometimes these attitudes are due purely to a special set of circumstances. When a person has gone through a series of important relationships with one or more individuals and has always been dealt with in a highly satisfactory fashion, this will tend to decrease his vigilance and caution and render him more or less gullible to the schemes of dishonest people. The normal individual, however, will soon wake up to the situation and after a few disillusioning experiences will change his reactions to the group, sometimes even to the other extreme of losing faith in all persons about him and becoming over-critical and cynical. This attitude, however, may be of more extreme proportions. At times we find it present in people with an inherent sense of confidence in human honesty and in abstract justice. Such people may not be affected at all by the fact that they are repeatedly made to suffer because of this tendency, and, although they appreciate the fact that on certain occasions they have made mistakes because of their faith, they will continue to be victimized by an unwarranted acceptance of the outside. This does not have to be accompanied by a similar attitude toward oneself. In fact, in a great many cases, we find that the over-rating of the outside may be dependent upon or compensatory for a certain feeling of unworthiness in the person himself.

Similar attitudes may also develop as manifestations of disease processes in previously normal people. The condition may then appear in a person who hitherto had not shown such at-

titudes to the outside and may last for a shorter or a longer period of time, depending upon the duration of the disease. We may finally find it in relation to a lowering of the powers of judgment and critique. This is particularly seen in cases of constitutionally mentally defective persons or where some severe disease has caused a decrease in the person's intellectual abilities. It is frequently found in persons suffering from organic brain disease (especially general paralysis). The persons outside are endowed with high qualities and possibilities. They are honest, superhuman in their strength, and so on. A vicious circle is thus established in which the reduction in judgment and critique increases the euphoria, whereas the feeling of well-being thus produced tends to render unnecessary whatever powers of discrimination are still functioning.

(2) *Dissatisfaction with the outside.* Here we find the opposite of the conditions discussed above. Within normal limits, but more especially in the case of certain mental disturbances, we may find attitudes to the outside that are over-critical, cynical, or faultfinding without any adequate basis. When such a condition spreads to the whole environment instead of being related to certain contents, we find the individual becoming suspicious, distrustful, even while he may assume or actually have a feeling of superiority and self-satisfaction. It may lead on the one hand to feelings of depression or apprehension, to ideas of persecution and reference; on the other hand, it may condition a tendency in the person to withdraw himself from the environment, to retreat within himself, and live his life apart from the outside.

Disturbances in Attitude to Oneself

Under normal conditions most individuals are conscious of a certain number of characteristics within themselves that are acceptable, and others which are not satisfactory. In normal individuals this varies from time to time, depending upon occurrences within themselves and on the outside. When things are going well and seem to work out as they are planned, the person may develop a feeling of increased self-confidence and

exaggerated satisfaction with his abilities. This may sometimes have disastrous results in that the individual may over-rate himself and undertake more than he can actually accomplish. Here, as in the previous conditions discussed, the normal individual will usually learn from his experiences and when he has over-reached himself because of a few successfully accomplished enterprises, he will, after repeated failures, come down in his self-estimation, sometimes to the extent of developing exaggerated feelings of inferiority. The normal individual usually fluctuates more or less between these two limits but does not usually go very far in either direction. If he does overstep the bounds he usually comes back to normal after a few swings of the pendulum. In abnormal states we find the following possibilities:

(a) *Oversatisfaction* with oneself. Here we find on the fringes of the normal limits the type of person that goes about with a feeling of exaggerated self-confidence, and with an inflated sense of importance and power. In certain types of persons this may be an expression of a constitutional deviation from the normal, and, although time after time the individual should have realized that his estimation of himself has been over-rated and is not in accordance with actual conditions, he will still maintain this attitude which may lead to serious interference with his ability to adjust. We may, however, find this attitude developing on the basis of certain psychopathological processes, due either to an exaggeration of a tendency in that direction or to some interference with the person's intellectual faculties which reduce the necessary amount of self-criticism. On this basis the person may develop ideas of grandeur, omnipotence, and all-importance; he may consider himself as a person of great abilities in whom other people are vastly interested, and because of that they envy him, try to make up to him, or even try to injure him. These individuals may tend to identify themselves with people of fame and high accomplishments, develop on the basis of the feeling of self-importance ideas that they are especially intended to carry out important missions, to become reformers, to purify the world, etc. It is quite evident that such attitudes will neces-

sarily lead to clashes with the environment and to repeated feelings that they have not been given due credit for their imagined accomplishments. Because of this feeling of importance and power they stumble over obstacles which normal people take into consideration before beginning an enterprise.

(b) Contrasted with this is the attitude of *self-depreciation* which may be based on repeated failures or on imaginary shortcomings within the individual. Feelings of inferiority, of inadequacy, inefficiency, lack of power, and so on, may still be found within the outer limits of normal or may be indications of psychopathological conditions. They, too, may be dependent upon a constitutional characteristic in persons who, because of some inherent peculiarity, always consider themselves as incapable of dealing with situations in which actually their abilities would be entirely adequate. Such persons show a lack of initiative to a pronounced degree. Before starting into anything they will think at length of the insurmountable difficulties that may present themselves and of their inability to deal with such obstacles. Even in the face of repeated proof that having once begun an enterprise, they have shown abilities and powers not only of average but even above average types, they will still continue in their feeling of inadequacy. This attitude may also develop in persons who have not previously shown them and who, because of certain experiences or because of some disease process, will lose confidence in themselves and consider themselves inadequate in the situation. Quite frequently we find that feelings of inadequacy toward certain contents represent substitute attitudes for actual inadequacies along other lines. Thus we find that persons who because of some reason have developed or have always had a sense of inadequacy in relation to their sexual power, will manifest feelings of inadequacy along the lines of other physical or mental abilities as a substitute phenomenon.

Just as in the case of disturbances in attitude to the general situation, we may find in the attitudes to the environment or to oneself disturbances characterized by indifference, ambivalence or inadequacy.

Chapter XIV

DISTURBANCES IN THE SUBJECTIVE COMPONENTS OF RECEPTION

THE *special* types of psychopathological disturbances in the field of experience may be approached along the same lines that we have followed in the discussion of the disturbances in behavior. We will consider first of all those phenomena of experience that occur in connection with the reception of material from the outside. Following this we will discuss in analogy to the disturbances in intellection, those of the subjective *evaluation* of the received material in its relationship to the person. This is, however, as far as we can go with the analogy, for in the field of experience we can find no phenomena that are similar to the functions of expression as considered under behavior. Expression, as we defined it, denotes a response to the *outside*. Although we appreciate the fact that responses in terms of experiences do occur, they necessarily remain within the individual and if they are expressed to the outside as responses or as indicative of responses, they fall into the line of objectively observable phenomena. It must be appreciated, of course, that responses in terms of expressions to the outside are usually if not always accompanied by certain experiences. The person who acts has the general subjective sense of activity as such, as well as the special subjective components that accompany each one of the individual activities. These, as well as the experiences which, apart from the actual motorization of the response, occur in a reaction to a given stimulus, can be seen to fall into the groups mentioned above:

- 1) They must be considered as *attitudes* when they represent the position that the person takes towards the act or response, even though it is his own.
- 2) They belong to the field

of the subjective components of reception when they are regarded in the sense of the individual's perception of these acts or responses. 3) Finally they must come under the consideration of evaluations when they represent the person's subjective appreciation of the meaning of such occurrences.

The Subjective Components of Reception

In discussing reception from the point of view of behavior, we have stressed the fact that the objectively observable evidences of reception are really only indirectly obtained and should be considered as indications, even if measurable ones, of the fact that the person in question has been the recipient of an influence from the outside. The subjective experiences that take place during the act of reception are intimately related to these objective evidences and are to a large extent responsible for their occurrence. The first of these manifestations to present itself to our minds, most probably, because it is the most accessible to us, is that of *perception*. By this we mean the person's conscious appreciation of the effect of the stimulus received. This function, however, even if it is the most clearly conceived, is not the only possible effect of a stimulus. In the first place a person may be affected by a stimulus, and even react to it, without being aware of its occurrence. We have already referred to this possibility in our discussion of *consciousness*. (v. p. 86) In a series of experimental investigations on this subject the author^{68, 69} found that when a person is exposed to a given set of stimuli and then asked to relate what he has *perceived*, he fails to reproduce all of them. Some of the stimuli that were omitted, however, were subsequently obtained from the dreams of these persons, showing that they must have been registered but for some reason were not reproduced in their statement. Just what has happened to these, whether they were actually perceived on the same level of consciousness as those which they did reproduce and were then repressed, or whether the reception occurred on a different level to begin with, is a question which we will discuss later. At present it is sufficient to note the fact that the person may reg-

ister stimuli and react to them without being consciously aware of having perceived them. Other evidences of this possibility were brought out in the discussion referred to above.

Outside of these subjective components of reception we must also mention two other functions, of which the person may be aware as occurring within him in relation to a given stimulus, but which do not really belong to the field of perception as such. The first of these and the one that is probably the most fundamental, is the appreciation of the *reality* of the stimulus. The second is that of the person's attitude to the particular content, i.e., *feeling*. We will discuss the pathological disturbances in this field, therefore, under the following three headings: 1) The sense of reality, 2) Feeling, and 3) Perception.

The Sense of Reality

The subjective experience associated with the reception of a given set of contents in a situation can be regarded as beginning with the "reality" appreciation. By reality we do not mean the same concept that one thinks of in philosophy, that is to say, "absolute reality." Psychologically or psychopathologically we understand, under the term reality, the quality of objective existence. Without wanting to give the impression of being solipsistic, we must, nevertheless, emphasize the fact that from a psychological point of view, contents that are perceived and are judged as actually existing are really our own projections into the situation. In the sum total of material that we ourselves are aware of as being present in our minds, we distinguish those which can be justifiably projected into the situation and considered as objectively existing, from those which we consider as existing only in our minds. The sense of reality, therefore, when applied to certain received material, whether it comes from the outside or from the person himself, is the experience of being justified in considering these subjective contents as having an actual existence.

Whether or not other standards of proof of the objectivity or non-objectivity of contents can be successfully advanced

by those who work in what is known as the "exact sciences," is a matter of philosophical and not psychopathological discussion. In psychopathology we find that far from being an exact field, the differentiation between what is subjective or imaginary and what is real, is not a clear one. In normal life we find that certain contents that are perceived are clearly seen as being objectively real. Others, such as daydreaming and fantasy or abstract thinking, are just as clearly appreciated as not being objectively real. But between these two extremes there is a wide range of possibilities wherein the reality value or reality sense of the content may be dubious, and this is especially true in the case of contents that come from the person himself. Even in the normal person we find that certain bodily sensations, changes in emotional tension, or appreciations of one's abilities or inabilities may appear to exist objectively at one time, while at another, even though they are of the same character or strength, they will seem to be purely imaginary in type.

It must be emphasized that in discussing the sense of reality we do not refer to those functions which are concerned in ascertaining the reality of a content by means of experimental proof. If, on seeing a certain object in a half-darkened room, one wishes to make sure that the object is really there, one proceeds to test the reliability of the visual perception by reaching out for the object. In that case, we are dealing with a function that, even if related or supplementary to the sense of reality, does not belong to it inherently. The function that we are discussing here is much more subjective than this and it is because of this, as James has pointed out, that we refer to it as the *sense* and not the *knowledge* of reality. It is an experience which accompanies all of the contents perceived by us, or, to be more exact, is really fundamental to them. Each content that is received by us either from internal or outside sources must line itself up either with the non-real or with the real categories, or will have to remain between them as questionable. This function, furthermore, is based on more complicated processes and ones that do not necessarily have to belong to conscious thinking. It is because of this that, as we

will see later, in certain types of disease where the sense of reality is disturbed we will meet with statements like the following: "I know that objects outside of me are there; if I bump into them they hurt me, when I look at them, I can see them. I can see their color and their shape, I can hear the sounds that come from them and yet I have the feeling of their being unreal." Experimental investigation by the person of the reality of these objects and the proof brought out by this either one way or the other, does not seem to influence the sense that one has in relation to them.

One of the most important reasons for this is the fact that in the appreciation of this aspect of reality, not only are our conscious perceptive powers being used, but a number of other determinants come into play. As we have shown in a previous publication,⁷⁹ the interests and attitudes of the person to a given content or contents and a number of other extra-logical means of appreciation determine their reality or unreality. James⁴⁵ has with justification pointed out that in the human being there is a certain function that serves as the observer or the judge of the reality of things, and all other contents in the situation, external as well as internal, become the observed items. The person may be in the process of carrying out a certain form of activity in which he deals with all contents in the situation as if they were really there and yet go on continually observing them and feeling that all or some of them do not actually exist for him. In the normal person this function does not usually reach the surface of conscious appreciation. As we go through life, in our everyday activities we have an undercurrent of this function which lends the aspect of reality or unreality to contents, without our actually carrying out a process of judgment as to these values. It is only under extraordinary conditions, sometimes found in normal individuals but more frequently in psychopathological states, that this function comes to the surface and we become aware of the fact that we are lining up the contents according to the degree of certainty which we have as to whether they belong to the one or the other. Contents that under normal circumstances appear to us as real or unreal may shift to the opposite side, and when

this shifting becomes particularly pronounced and opposes that which one expects on the basis of actual perception, we begin to rationalize and undertake experimentation to ascertain why objects which are considered as real by others give us the sense of unreality.

Theoretically we can differentiate between two types of disturbances in this field, that is to say, an exaggerated sense of reality where contents that are usually not appreciated as objective or should, by a process of logical thinking, be proven to be non-objective or unreal, gain the quality of reality, and the partial or total loss of the sense of reality in relation to contents that are by others and by ourselves on other occasions considered as real. Actually and in practice we find that both of these types of disturbances are very closely interrelated and in psychopathological processes may follow one another in their development.

(1) *Increase* in the scope of the sense of reality. In the previous discussion we saw that in the life of normal persons a considerable proportion of actual occurrences may take place without the accompanying experience on the part of the person of their objective existence. This is especially true of occurrences within the person himself. Under certain conditions we find that a number of contents which have hitherto been outside the scope of observed objectivity, force their way into its field and become split from the observing ego. Most of us have had the experience that sometimes when talking we may suddenly become aware of the fact that our voice is something foreign to us, something objective, that we, as an observing entity, can listen to and evaluate in its different inflections, even to the extent of objectively judging the content of what is being said. Analyses of the mechanisms of such phenomena show that they are frequently caused by a sudden loss of personal interest in what is being produced, because of an increased interest in something else that claims our attention and seeks expression at that moment. If, for instance, prior to giving a lecture on a certain subject, one has gone through an experience which has not been definitely settled, and has been forcibly pushed out of mind because of the necessity of

applying oneself to the lecture, one finds that while concentrating on the subject at hand, one's main interests may suddenly be claimed by the discarded, unsettled problem. A certain amount of the necessary interest in the subject at hand will then be withdrawn and it will appear as something foreign, and gain in its quality of objective existence by virtue of the fact that it is outside the person's own interests.

In psychopathological conditions we find that phenomena which usually exist without having for us a sense of their being objective and real, may suddenly become so. With the gaining of this greater actuality they also gain a certain amount of strangeness which is, in itself, the beginning of the development of a loss of the sense of reality of those contents. Thus the various functions in our own body, the activities of such organs as the gastro-intestinal tract, the heart, and so on, may become objectified and subject to the judgment of the observing ego. It is on this basis that one develops that which we will consider later under the aspect of the "objectification of subjective contents." Various functions may be included in this transformation; our thoughts, our feelings, even to the very sense of reality. It may reach a point where the whole of the hitherto subjective contents are thrown out into objectivity and the observing ego becomes an empty shell devoid of content outside of this one function of observing such a world of objectivity. Various co-incidental manifestations then come into being: a feeling of depression, anxiety, suspicion, all of them conditioned by this exaggeration of the scope of what is impersonal and objective. This leads us to the consideration of:

(2) *The Loss of the Sense of Reality.* As we have seen above, the feeling of the reality of contents outside of us is based not simply upon the manifestation of their objectivity as it can be appreciated by perception and reasoning, but also upon the amount of personal interest we have in them. The statement that contents in the objective side of our world must, from a psychological point of view, be considered really as projections from the inside, gains particular importance here. There is in human beings a definite necessity to project cer-

tain real perceptions into the outside world. But it is qualified by our desire of having these contents projected. In a manner as one loses interest in things outside of oneself, the sense of their reality becomes more intellectual and less emotional, and the desire to project them to the outside becomes less pronounced. When a large portion of a person's interests is withdrawn from the objective world, the latter gradually loses its value of reality and the person will then continually have to prove to himself that objects outside of him actually exist. This disturbance in different degrees and under different forms is very frequently found in practically all types of mental disease, especially at the beginning or at the end of the process. The feeling of unreality may still be accompanied by a certain respect for the functions of the intellect, when the person is aware of the fact that all of these objects that to him appear as unreal must actually exist because of the perceptions he receives from them. In the more serious diseases, however, it may override these intellectual proofs and the person will lose all contact with the outside world regardless of the various perceptions he may still be receiving from it.

Instances of this type of experience are found in various forms of mental diseases and are usually referred to as the phenomenon of *depersonalization*. This phenomenon may, in certain cases, be manifested only as regards things actually existing outside, whereas the person himself, his own body and thoughts, remain unaffected; it may concern mainly contents within the person leaving the outside unaffected, or, finally, it may affect the whole situation. Usually the involvement includes both of these factors to a greater or lesser degree.

An example of this form of disturbance can be seen in the following case: The patient in question was a young married woman who came into the hospital shortly after the birth of a child and following the occurrence of a series of unpleasant events. She was physically well, her intellectual functions were normal; she was somewhat quiet and subdued, sitting by herself most of the time with a vacant but somewhat dejected expression. She did not exhibit any interest in anything going on about her, and did the work that was required from her in an efficient manner but with a

certain air of futility and abstraction. Her own description of her experiences were as follows: "There is nothing wrong with me. I haven't any pain or ache. I do not feel particularly sad and I have no peculiar thoughts occurring in my mind, but everything about me seems to have changed. It seems that there is a veil in front of my eyes or as if I were not actually existing but dreaming. As I sit and talk to you and look at things, I see and hear them yet they don't seem to have any meaning. I look outside and see the wall of the hospital yet it doesn't seem real to me. It is like looking at something that is a mirage. My child and husband come to see me but I have no feelings for them, and it looks as if they didn't have anything in them that meant anything to me."

Here, therefore, the phenomenon of depersonalization seemed to affect things within as well as outside of her. She still retained the ability intellectually to appreciate the actuality of things, but this was not sufficient to give her the *sense* of their reality.

Another patient suffering from a deep depression developed a somewhat similar state but of more serious dimensions at the very onset of his depression. He, too, stated that everything around him seemed to have lost all meaning to him. The objects outside his reach seemed to him as non-existent, and he would actually have to touch them in the attempt to prove to himself that they were really there. People around him assumed characteristics of supernatural beings. They could do things which he himself could not do and which prior to this disease he had no idea people could do. When playing cards he would find that he could not tell by a process of logical thinking what the next moves on his part should be; the persons around him seemed to be able to do so, and he deduced from that that they had some supernatural power of looking through the cards and actually seeing the faces of his own cards. He considered himself as inferior to these persons by being unable to do the same. The other persons when they looked at him could read his mind and tell what he intended to do.

In this case we find that the patient not only lost the sense of reality, but he began to distrust his ability to ascertain the objectivity of his environment by logical experiment. He actually began to draw upon the possibilities of supernatural powers in the determination of reality. Something was neces-

sary in this determination that was not only above his own abilities at that time, but even above those that he had prior to the disease.

Finally we come to a still more serious form of disturbance in this respect in which the person expresses his feelings of unreality as follows:⁷⁹ "I am an artificial object, a product of a scientist; everything outside of me is unreal. The white material on the street is not snow. I feel as though I have a peculiar body. My head and bones do not feel natural. It seems as if they move on hinges." He came to perceive things outside of him as being totally changed. At times people and objects would look as if they were increased or decreased in size and of distorted proportions. Even the sense of time changed in that certain functions that he performed within given lengths of time were judged by him as taking a much longer or a much shorter period, and so on. He gradually developed a total transformation of himself and the outside world. He began to have hallucinations of sight and hearing, and he went into a serious form of deteriorating mental disease.

Here with the feeling of unreality there has developed also a loss of the intellectual appreciation of outside things, and to him the reasoning undertaken by persons outside himself on the basis of actual perceptions had no weight in proving the reality of these objects. Various other phases of this disturbance can be observed in the more marked cases of depersonalization. The patients complain that they are incapable of experiencing either pain or pleasure; love and hate have ceased within them; they have a feeling of being lifeless, of being dead or like automats.⁹⁵

Disturbances of the Feelings

As we saw above, the most fundamental characteristic of the subjective appreciation of the contents of reception is that of the sense of reality. Next to this and before one comes to the perception of the content in itself as a special entity, we have the subjective element which is probably characteristic of every received content, namely, that of feeling. In practical life, in normal individuals only feelings of a certain intensity

and type are experienced as such. As the normal person goes through his daily experiences, a very large number of perceptions do not seem to be accompanied by any state of feeling toward them either because the interest of the individual in these contents is not very pronounced, or because for some reason these interests are not allowed to present themselves as such. The normal person, therefore, appreciates as actual feelings toward objects, only those that are of a strong enough intensity and of a type that does not interfere with the accepted standards of what feelings one may experience without coming into clash with oneself or the outside. Theoretically, one might justifiably make the statement that any content that is perceived and that has an appreciable effect upon the person, also produces a certain feeling. From a broad, general point of view, one could divide these feelings into two large groups, depending upon the acceptability or unacceptability of the perceptions.

Whether these two groups can also be described as analogous to the primary feelings of pleasure and pain, remains a question. Superficially we certainly find contents that are to all intents and purposes unacceptable to the person and yet produce a certain degree of pleasure, and vice versa. Within recent years it has been observed that on going deeper into the experiences of the individual, we can show that what is unacceptable on the surface may be rendered acceptable by certain patterns under the surface. It must also be remembered that no relationship between the person and the contents he perceives is ever so simple and one-sided that it is either totally acceptable or totally unacceptable, and that the states produced in him are either totally those of pleasure or totally those of pain. Most frequently the feelings are of a mixed type with one or the other predominating. Because of this we find that the various aspects of feelings, even if they can be, in broad terms, lined up on the one side or the other, present certain characteristics which render them distinct from one another. Thus, for instance, if we consider the feelings of love, pity, pride, friendship, and so on, as having this in common, that a certain positive nature in terms of acceptability is com-

mon to all of these in the relationship to the particular object, we must also appreciate that they differ from one another mainly because of the variations in the mixture of approval and disapproval. In the feeling of pity, for instance, we may have the two opposite attitudes of sympathy and contempt. Similarly, if we consider the feelings of hatred, anger, contempt, and so on, as lined up under the heading of unacceptability, we again find distinct elements in each one of them that are opposed to the other. For instance, hatred to an object does not necessarily exclude a certain amount of admiration for it, contempt does not exclude sympathy, anger does not exclude love, and so on.

It must be emphasized here, that in discussing feelings we should remember that we are not dealing in the consideration of these with logical evaluations. The symbols in the form of words that stand for these feelings are at best only symbols and cannot at all express the actual experience with all the richness, ramifications and depths that it has. When one says, for instance, that one loves a person because of certain characteristics in that person, one simply rationalizes the causes of a feeling which is more fundamental than can be explained by these reasons. Similarly, when we speak of doing certain things to a person because we hate him, we are evaluating certain activities that we undertake on the basis of a feeling which may in itself have very little to do with these expressions. With these points in view we wish to discuss the disturbances in feelings under the following two headings:

(1) *Disturbances in the Intensity of Feelings.* Variations in the depth of feeling and in the degree in which it affects the person under different circumstances can be observed even within normal limits and may be either general or special in type. In some persons, for instance, we find a pronounced intensity of feeling accompanied by a restriction in scope. In such persons one usually finds not only an intense experience of feeling but also an exaggerated expression of it in the form of emotional response, which for the time may displace all other considerations. They are usually slow in response, but once they reach the climax they will go to extremes and may

maintain this state for a long time. In contradistinction to these we find other persons who are shallow in their feelings. Their actual experience of feeling as they describe it themselves, or show it by their reactions, is superficial and fleeting. One moment they may profess to be very angry at a person and the next moment they are indifferent or even friendly. Their expression of these feelings is also mild and of short duration.

These differences in intensity may also be noted in regard to special objects or under special circumstances. A person who is usually meek and easy-going may, when aroused by an extraordinary situation, become extremely angry and go to any extent in expressing this in his activities. In certain psychopathological conditions we may find exaggerations of these differences in intensity. In some patients, for instance, we find that a feeling developed towards a certain content becomes so intense in its proportions that nothing else in the world seems to matter. When this object is lost, everything else in the world loses its significance. The objects that produce this marked intensity of feelings do not necessarily, when we deal with psychopathological material, have to be associated with logically conceivable reasons for such a reaction. Apparently unimportant matters may, in such cases, arouse intense feelings, either because of the abnormal sensitivity produced by the disease, or because of certain factors under the surface that actually make the content much more important than appearances would indicate.

(2) *Disturbances in the Quality of Feelings.* Here we deal first of all with the possibility of loss or marked diminution of the ability to experience feelings toward contents. This is a condition which is frequently found in relation to the phenomena discussed under the terms of indifference or apathy in general attitude. A person may, under such conditions, lose the ability of experiencing feelings which are present in normal individuals. Such persons, for instance, are actually or apparently left untouched by occurrences which, in normal individuals or in the same person under normal circumstances, would undoubtedly call forth a most intense feeling; acts of

benevolence are left without the accompanying feeling of gratitude; insults without the expected feelings of resentment, and so on. Another form of disturbance in quality is that of inadequacy of feelings, where the person may experience a feeling of fear when he should have confidence, a feeling of anger when he should be pleased, a feeling of hatred when there previously was and should be love. Finally we deal in these disturbances with the phenomenon of *ambivalence*, where opposed and conflicting feelings are experienced simultaneously in regard to the same content, as, for example, loving and hating the same object at the same time, etc.

Disturbances in Perception

Perception can be regarded as the final and logically most accessible phase of the subjective components of reception. All contents perceived by the subject will invariably have the more fundamental qualities of reality and feeling, although not all contents which are experienced, or toward which the person has a certain feeling, necessarily have to be perceived consciously. Perception, as a subjective function, may be defined as the conscious appreciation of where, when, and why a content takes place. As such, therefore, it deals with functions that have already been discussed in the behavior aspects of reception, but where we have simply touched upon the objectively observable evidences that the person shows to the outside, of having perceived the content. Here we wish to discuss mainly the subjective aspects of this function, and will consider not only perceptions that are based on actual stimuli outside of the person, but also those that arise within him, and may be referred to as imaginary. In both of these the person has the subjective experience of perception, and it is from this point of view that we wish to discuss them. In disturbances of perception we may have the following types:

(1) *Intensity*. The disturbances here may take the form of either an increased or decreased intensity, general or special in nature. Thus, this disturbance may show itself in an *increased* intensity of perceptions of all types; colors become

brighter than they are, sounds louder, pain more intense. This may be a characteristic of a certain type of person or may be produced by some disease process. This does not necessarily have to affect the objective evaluation of the stimulus. For instance, a sound may be evaluated correctly as being of a certain pitch, or a certain distance away from the person, and yet the person may state that the sound is more intense and more vivid than he would expect it to be under usual circumstances. This may also be true of visual and other forms of stimuli. In other cases there may be a *decreased* intensity in all fields or in some special field. This is frequently found in cases of de-personalization where the person can describe the objective characteristics of the sensations properly but experiences them as lifeless and flat. Sounds of people's voices or the voice of the person himself in cases of decreased intensity may assume the characteristics of hollowness and flatness, or, where there is an increase of intensity, as particularly harsh and grating.

(2) *Qualitative*. Here we deal with those phenomena that have been referred to previously under the term *synaesthesia*. Sounds may be perceived altogether as visual images or as a combination of auditory and visual images. Cold may be experienced as pressure, odors as tastes, etc. Then we have in this field the large number of phenomena known as *sense deceptions*. These may be of two types:

(a) *Illusions*. These are pathological perceptions based upon actually existing stimuli, but not adequately related to them. Thus a person walking through a dark field at night, especially if he happens to be afraid, may perceive the vague outline of a tree stump as a threatening enemy, the rustling of the leaves as steps of persecutors, etc. Depending upon the factors that condition or characterize this faulty perception, we may have different forms of illusions:

Completion Illusions consist in projecting into a series of stimuli some that are really not there but that serve to complete the picture. In reading, for instance, we frequently find the tendency to see letters, syllables or words that have been left out of the sentence. The person expects these contents to be there in order to give him a complete picture of what is in-

tended to be conveyed, and therefore he actually perceives them subjectively. The quality of the *Gestalt*, which is an inherent one in the perception of contents, enters into the causation of these deceptions in perception. An incomplete figure may be seen as a completed one. A gap in a circle may be overlooked, the person actually believing that he has seen the circle as a complete one rather than one with a gap.

Emotional Illusions are faults in perception that are based upon certain emotional tensions in the individual. A feeling of fear and anticipation of danger may cause us to perceive innocent or unimportant stimuli as sources of danger. A person walking into a dark room when under such tension may interpret the movements of the shadows on the wall as the movements of enemies that are going to attack him. Persons away from home and homesick may easily mis-identify people they see on the street with persons they have left at home. An individual talking in the next room will be perceived as a friend or relative that has come to visit them, etc.

Pareidolia are illusions in which persons read into indifferent objects certain characteristics which are not there. The shapes of clouds may be seen as those of certain animals or other objects, the movements of smoke through the air may take on bizarre and unusual configurations. In the more distinctly pathological states a person may interpret an innocent smile as a sneer directed against him, undifferentiated sounds as threatening voices, innocuous remarks as having hidden meanings, etc.

Activity illusions are those of misinterpreting still objects as moving and moving objects as standing still. Psychological textbooks are replete with examples of this type of illusion. There are other forms of illusions that occur less frequently and are too numerous to mention here.

One form, however, which occupies a position between illusions and the next subject to be considered, that is, hallucinations, and may be present in normal individuals as well as under psychopathological conditions, should be considered here. This is the phenomenon of *eidetic vision*.⁴⁴ It is the persistence of a visual image after the object responsible for it is removed

from our field of vision. It should not be confounded with after-images, because here we see the object in its proper relationships and proportions and in the actual colors which it had. Certain normal children seem to show that phenomenon to a particularly pronounced degree. When a picture is placed before them and they are allowed to look at it for a certain length of time, they will reproject the image of that picture, after it was removed, on the original background. They may see it there in all of the details and colors which the original had. This is a condition which really does not belong to the narrow limits of illusions because here it is not a matter of distorting or misinterpreting certain stimuli but of projecting these stimuli into a field where they do not exist at all.

(b) *Hallucinations*. These are perceptions that are not, so far as we know, based on actual outside stimuli. A person alone in his room far removed from any possible related sounds, may hear the voice of his dead parent talking to him in a distinct and intelligible fashion. He may see visions of people or other objects in a room where no such stimuli are present. Hallucinations differ in the degree of reality with which the person experiences them. In some cases, especially where they are produced by some organic disease of the brain, they may be perceived with as much of a degree of reality as actually existing stimuli. As we descend in this degree of reality we find various approaches to fantasies in normal persons. Some patients qualify the statements concerning their hallucinations by saying that the sound of the voice was not quite clear or was not very loud. Others may even go to the extent of saying that although they hear the voice, it is really within their own heads. The degree of reality of the hallucinations is not very easily determined. A patient may state that he hears a voice talking to him, the sounds of which are just as real as that of the physician interviewing him. When, however, the physician hides behind some protecting object and imitates the voice according to the description given to him by the patient, the patient will immediately realize the difference and may even say that, of course, this was not the same voice, because the one that they have just heard was "more real."¹¹⁷ Still nearer to mere

fantasy are the hallucinations which the patient at first describes as actually occurring, but then qualifies by the statement that they did not come from the outside but from somewhere inside of him. The stomach, the head, and other organs are frequently used as fields for projection of such perceptions. These hallucinations are sometimes referred to as pseudo-hallucinations. To these, too, belong the hallucinations that are experienced under certain states of reduced clearness of critique. Mention was already made in a previous discussion of the so-called *hypnagogic hallucinations*; also those that one perceives hazily in states of exaltation, fatigue, and others.

Hallucinations are usually classified and named according to the organs of special sense through which they are believed to be perceived. Thus we speak of *auditory* hallucinations when a person hears sounds, *visual* hallucinations when they are in the field of vision, *olfactory* when they are referred to the sense of smell, *haptic* when they are referred to the sense of touch, *somatic* when they deal with certain sensations coming from the different organs, etc.

To this field of the subjective components of perception belong certain disturbances related to the perception of time and space. We have already considered some of the aspects of this subject in the discussion of the behavior components of reception. There are certain experiences, however, that are purely subjective in nature:

Chronognosis is the term applied to the perception of time as a purely subjective content. By this we mean the appreciation of the passing of time as a dynamic factor without any relationship either to other events or to standards of measurement. A person in a dark room without anything special occurring outside of him or without the ability to judge the passing of time by changes in certain standards of measurement or in relation to such occurrences as the sequence of day and night, will still have the subjective experience of living through time. Whether that is related to some innate quality in organisms that exist through time and that change in it, or whether it is merely an internal form of measurement of time by one's rhythmicity of functions such as heart-beat or respiration, or, finally,

a judgment of time on the basis of certain established habits such as fatigue, sleep, hunger, and so on, remains a question. Of the disturbances in this field we find first of all the apparent cessation of the movement of time in some psychopathological cases. This may be dependent upon some factors related to those that condition amnesia. Actually we find in some cases the loss of days or even weeks. The events occurring during that time may be remembered in detail but they would be placed as having occurred concomitantly with other events which happened either before or after the period of time that has dropped out of the person's existence. It would seem that during that particular period of time the person actually had no subjective appreciation of the passage of time. Then we have the disturbances in relation to the person's judgment of various conditions that have transpired in time. We meet here with experiences where he will state that he died and was reborn and that now he is actually an infant three weeks old, or that on a certain day the person died and is still dead and nothing has happened since then. He may discuss details which have happened during that period and admit that these things have happened, but either refuses to see the incongruity or places the time of the occurrence of these events back into the period when he considered himself as still living.

Similar considerations are to be appreciated in the perception of space. Here we find a certain fundamental subjective appreciation of space, as such, without any relationship to contents within it. The feeling of oneself as an object in space without any relationships to above or below, right or left, or contact with other objects is something that is innate within us. In certain disturbances belonging in this field we find experiences during which the person is hurtled through space although he can actually see himself standing still. Dizziness and vertigo, up to the extreme experiences of complete chaos within space, are other manifestations of this disturbance.

Chapter XV

DISTURBANCES IN THE FUNCTIONS OF SUBJECTIVE EVALUATION (A)

Concerning Subjective Evaluation

WE WISH to discuss here the disturbances that occur in those functions by which the individual appreciates subjectively the meaning of the elements in a situation. We have already touched upon this in the discussion of the intellectual functions (v. p. 105), especially those phases of it which deal with thought, judgment, and comprehension, i.e., the determination of relationships. We saw how conclusions are reached as to the existence of such relationships, the disturbances that may occur in these functions, and how they may influence the adjustment that the person will undertake. There, however, we have only considered the objective phases of such functions. We saw the person then functioning as a judge with a greater or lesser insight into the actual, objectively valid relationships and the objective understanding of these relationships. Even there we have stated that the purely objective and logical reasoning concerning these relationships is only one aspect of the processes which are sometimes included under the term thought and which actually determine the position that the individual takes towards the situation.

Even in normal individuals we find that in addition to such objective logical considerations, a large number of other functions is introduced in the process of gaining insight into the relationships of contents within a situation. This, of course, is mainly true in appreciating the relationships between the subject and the objective world, but it may also apply to apparently impersonal relationships that are seen by the indi-

vidual as existing between two outside contents. The old dictum of "the wish being father to the thought" and the newer concepts, introduced recently into psychology, of the importance of such factors as anticipation, hope, wish, and others, in influencing logical thinking, serve to show us that objective, logical insight into these things is only part of the process. Actually we find, even in normal individuals, that this superficial covering of logical appreciation may not only be part of these processes, but may actually serve as an attempt to justify an insight which has already been gained on the basis of other functions. We refer here to the well-known process of *rationalization* wherein we find that conclusions, decisions or insight, reached on the basis of extra-rational processes and coming into consciousness as a ready-made product, are subsequently analyzed in the light of logical reasoning to show either to the individual himself or to outsiders that such conclusions are justified.

It is not always easy, of course, to rationalize successfully. Frequently we find the sometimes very painful and disconcerting realization that no logical reasons can be found that are weighty enough to explain rationally why a certain conclusion has been accepted. In the normal person we find frequently that when such an occurrence takes place the individual distrusts such conclusions, and being conscious of the fact that he has reached them on the basis of some unknown mechanisms, he does not act upon them because he does not feel safe in trusting to these blind forces. This is not always the case, for we are all aware of situations in ourselves and others where such methods are followed and the person acts upon them without the necessary approval of his logical thinking processes. We apply various names to these, such as "hunches," "intuitions," etc., all of which merely indicate that the person has acted without the usual process of logical reasoning.

These forms of reaching conclusions are much more frequent in psychopathological conditions, and there they give rise to frequently erroneous evaluations, and thus lead to disturbances in adjustment. In the average normal person, whether these methods of insight are acted upon or not, the

person usually is aware of the fact that he has no objective proof of the truth of these conclusions. In other words, the normal person can undertake successfully the proper differentiation between those methods of evaluation that are purely subjective in nature and those that are objectively valid, and have been reached on the basis of logical reasoning. This process may be termed as the *subject-object differentiation*. With this in mind we may classify the disturbances in evaluation into three groups:

First, those in which the person, even when acting upon purely subjective forms of evaluation, appreciates the fact that he has not gained a rational insight into its mechanisms, that is, where the subject-object differentiation is preserved. Second, where the person loses sight of the fact that the evaluation is of a purely subjective nature and that he has no proof in terms of objective logic; in other words, where there is a loss of subject-object differentiation. Third, a series of disturbances that are best designated as transitional, wherein there is a gradual transition from the one to the other.

Disturbances in Evaluation with the Preservation of Subject-Object Differentiation

Here we find a series of mental processes in which the weighing of relationships of contents is undertaken on a subjective basis but where the person is aware of the fact that he has no objective proof of its validity. In their rudiments we find them present within normal limits, but as they increase in their power to influence behavior, they gradually cross the dividing line and reach the field of the abnormal. They may be discussed from the point of view of whether they are undertaken in relationship to contents outside of the person, that is to say, external, or whether they are mainly in relationship to contents in the person himself, that is to say, internal.

(1) *External contents*. One of the most frequent manifestations of this type found, even within the normal limits, is that of anticipation. When a person is working under the stress of some emotional state, whether it be the fear or hope of some

occurrence outside of him, he will frequently have a strong anticipatory feeling that the things for which he hopes or of which he is afraid are actually going to happen. A person, for instance, working under some anxiety, some vague foreboding of an impending calamity, finds himself about to enter a dark room in which he has never been before. He anticipates all manner of danger lurking behind that closed door. He will stop before entering to decide whether he dare go in. He has no objective evidence that any danger actually exists in the room, but on the basis of the anticipation which is purely subjective, he may fail to take the step that he possibly would have taken had there been no anticipation of danger. When this person is asked why he did not go in, or when he analyzes the situation himself, he is quite aware of the fact that he had no objective proof that there was danger in that room; in other words, he appreciates the subjective nature of the process which has caused him to go back.

The differentiation here between what is still within limits of normal and what is definitely pathological will depend upon the importance to his general adjustment of the act which the person failed to perform. If these fears do not interfere seriously with the person's adjustment, either through their intensity or the frequency with which they occur, they may still be considered within normal limits. If, however, the underlying anxiety with the subsequent anticipations prevents the individual from carrying out acts that are of great importance to him, or if it influences a great many of his activities and for a prolonged time, we speak of it then as pathological. The same, of course, is true of other forms of anticipation that are conditioned by such emotions as hope, desire, and so on.

Closely related to these phenomena are the evaluations that are concerned with special contents in the environment. A person who is otherwise quite logical in his general mental activities may have an attitude of this type to a certain circumscribed sector of his life. The best known examples of this type of phenomena are the so-called *phobias*, or fears. It is usually difficult to understand what emotional undercurrent is the conditioning factor in such a phenomenon. Persons, for instance,

who are otherwise quite courageous and are not prone to allow minor anticipations of danger to divert them from the carrying out of different acts, may manifest a fear of high places. In all other fields of their activities they may be quite logical in reaching conclusions as to whether they should or should not act in a certain way, but in this particular one they follow a blind, irrational form of evaluation and will refuse to ascend any kind of elevation.

Fears of this type may develop in connection with other contents, and certain names have been applied to the more commonly occurring phobias. Thus we have the phenomenon of *agoraphobia*, which is the fear of entering open places. This, as was mentioned above, may only be slight in nature so that although the person has an aversion to going into an open place, he will, if his going there is important, overcome his fear and proceed about his business. He may feel uncomfortable while doing so and have a vague feeling of fear all through the carrying out of these activities, but he will not allow this to interfere with acts that are important to his adjustment. As we approach the more pronounced abnormal states, we find that the person may refuse, under any consideration, to enter open places and even if it interferes very definitely with his ability to get along, he will still not be able to overcome this fear. Such a person if he is asked what he fears will admit quite candidly that he doesn't know and that probably the whole thing is absurd. In other words, we have again a disturbance in evaluation but a preservation of the subject-object differentiation. Other forms of frequently occurring phobias are as follows: *claustrophobia* is the fear of entering closed or narrow passages; *nyctophobia* is the fear of darkness or night; *aichmophobia* is the fear of sharp objects; *astrophobia* is the fear of storms; *phobophobia* is the fear of being afraid.

(2) *Disturbances of evaluation of internal contents.* Here we find phenomena which manifest themselves in the evaluation of contents within the person himself on the basis of subjective consideration. They may deal either with psychic or with somatic contents in the individual. Of the first, one of

the most typical examples found in normal individuals as well as in pathological cases is the phenomenon of *doubt*. We have already referred to it in the discussion of *decision*. There, however, we dealt with the necessity that some individuals find for taking care of all possibilities that may arise within a situation before a decision can be made. The person, in that aspect of doubt, is merely going to further extremes than are actually necessary—the different possibilities under consideration are logically valid ones even though they are carried *ad absurdum*. Even in these we may deal with a fundamentally subjective mechanism for the doubt, and only by rationalizing does the person discover these different possibilities.

We may, however, find that this rationalization is not even attempted. A person is facing an act of decision. Logically he should, and knows that he should, act in a certain way. Subjectively, however, he feels incapable of trusting himself to the extent of an actual decision. All possibilities as he can see them point toward his making that particular decision and yet he cannot bring himself to do so. Under the surface, of course, there may be a number of conditions that make this decision unacceptable. The person, however, does not see them. All he knows is that he has a strong doubt about a necessary decision without knowing why. We find this form of activity, very frequently, among normal individuals. There, however, as in the previously discussed phenomena of anticipation, when the decision is of great importance the person acts, even though he is uncomfortable in doing so. In the field of psychopathology, however, we find an exaggeration of this process to an extent where it paralyzes all or most of the activities because in all acts, important as well as minor, the individual finds himself doubting his conclusions and therefore putting off the actual decision to act.

Another form of evaluation of this type in relation to psychic contents is the phenomenon of *obsessive* thought. In normal mental activity we are frequently aware of apparently nonsensical or inappropriate thoughts running through our minds. A person sitting in a distinguished gathering may have a fleeting thought pass through his mind of how startling it would

be if he were to get up and perform some ridiculous act. He may even chuckle inwardly at such a thought, amuse himself by turning over the various possibilities and consequences, but ends by forcing the thought out of consideration and continues to behave in a normally approved fashion. Whether even in this type of mental activity there may be some definite set of mechanisms that condition such an inappropriate intrusion of a peculiar thought, is a question which we can not consider here. It is sufficient to appreciate that the normal individual realizes that the whole thing is subjective in nature and hence need not be considered further.

As we proceed towards the field of the abnormal we find such thoughts intruding themselves with greater frequency and force and the individual begins to become apprehensive lest he may actually respond to such thoughts. In trying to compensate for such experiences the individual may go through various activities which are intended to take his mind off this thought. Such a thought begins to gain the dimensions of something tangible, something foreign, that has a more or less autonomic existence within himself and tends to influence his behavior in certain ways. In the more severe cases we speak of these thoughts as *obsessions*. An individual will have these thoughts referring to some particular act or a series of acts intrude themselves upon his mind, take up a very important place in his daily activities and force him to think about them continually. Such a patient may find himself incapable of doing anything else. As he continues to think about this possible form of behavior, he goes on to the development of certain compensatory mechanisms which are intended to divert these thoughts, but the further he goes, the more obtrusive they become until they finally paralyze all other activities and occupy his mind practically to the exclusion of everything else.

The case quoted in the introduction (v. p. 5) serves as a good example. When the patient heard that a woman in her neighborhood killed a child, the thought began to come into her own mind that it would be dreadful if she did the same thing to her grandchild. She was at first able to put this idea out of her mind and go on

with her usual activities. Very soon, however, it came back and as time went on it continued to do so with increasing force. Every time she saw a knife, an axe, or any other object with which she could possibly kill the child, she would think about it, sometimes even to the point of picking up the knife and assuming various positions which she would take if she were actually going to kill. This thought then spread to include her husband, and both of these obsessive thoughts became so strong that she could think of nothing else, became extremely afraid that she would actually carry out this idea, and finally all other activities became completely paralyzed. The emotional undercurrent of an actual wish to get rid of the child and the husband which was based on certain experiences in her earlier life was found to be responsible for the development of such a thought. Furthermore, the actual occurrence which set her thinking about these things was very definitely related to these mechanisms. On the surface, however, the phenomenon dealt with a subjectively conditioned evaluation of a thought which affected the whole behavior of the individual. She knew all the time that it was only a thought within her own mind. She knew or thought she knew that she had no reason to undertake this act, at least no logically appreciable reasons. In other words, there was a correct preservation of the subject-object differentiation.

These forms of obsessive thought are quite frequently encountered in certain types of mental disease and may occur in various forms. Some of the more commonly occurring forms, for instance, are the so-called *hand-washing* obsessions in which the person develops an idea that he has something infectious or injurious on his hands and washes them on numerous occasions. He then begins to have the idea that perhaps all of this dirt is not washed off. When reasoned with he will realize that this is absurd and that no such conditions can actually be true, and yet he will continue to wash his hands. He derives satisfaction from the process of washing them, even though he knows objectively that there is nothing wrong with them. Another form of obsession is that of the fear of contamination, either of the person himself by others or of himself as the contaminating agent to other people.

A series of similar disturbances may be found in regard to somatic contents. The most typical and most frequently oc-

curing both in normal and abnormal individuals is the disturbance in the evaluation of sensations from various parts of the body when they are judged as indicative of certain pathological conditions. We are all familiar with the usual occurrence in the case of medical students after they start into the study of clinical subjects. A number of them will begin to think that they have various diseases about which they are told in their lectures. Sensations from the region of the stomach, which have been present before but which have never been given any attention, will suddenly loom up as the possible first symptoms of cancer. Vague pressures in the head will be interpreted as brain tumors, etc. In these instances, of course, the disturbances are not only mild in nature, but will also be cleared after a physical examination. When the person discovers that there is actually no objective proof of his having such a disease, the condition is cured. On the other hand we find in abnormal conditions a sticking to the subjective opinion in spite of all objective reasoning to the contrary. A person may develop a fear that he has a certain disease because of sensations that come from the part which he thinks is diseased. He will go to various physicians, undertake all forms of physical examinations and laboratory investigations, and in the face of all evidence to the contrary, still have the fear of the disease. He may even appreciate the fact objectively that probably he has no such disease, but he cannot rid himself of the fear. We do not as yet refer to those conditions where ideas of disease are developed without any definite physical basis and, furthermore, are not particularly influenced by the assurance that such a disease is not present. In other words, here we are concerned mainly with those conditions where the subject-object differentiation is still well preserved.

Chapter XVI

DISTURBANCES IN EVALUATION: (B) TRANSITIONAL

IT IS not possible to draw a clear-cut line of demarcation between the disturbances that have just been discussed and those in which the subject-object differentiation is lost. It is true that in some cases, especially of pathological mental activity, we can distinguish certain phenomena which clearly belong to the first, and others that just as clearly fall into the second. In between these extremes, however, we find a series of gradations which can be regarded as *transitional* forms. Our appreciation of these phenomena is rendered much easier by the occurrence of analogous forms during the different stages of the development of the human mind. We refer here to the fact that the function of subject-object differentiation can be observed to emerge as the individual develops. We are all familiar with the fact that a child may, while engrossed in its toys, gradually and imperceptibly let himself slide into the belief that these toys are really alive and can be dealt with as such. The child may even start out with the appreciation of the fact that he is just playing and that in talking to his dolls or toy animals, feeding them, or punishing them, he only "makes believe," but as he becomes engrossed in the play and is carried away with his own fantasy he will frequently come to believe that these toys are really endowed with life potentialities. To say that the child then projects his own desires and intentions into the toy may describe this process to some extent, but it does not alter the fact that for the moment the child has lost the ability to differentiate between what is subjective and what is actually objectively true.

Similar types of phenomena have been described, especially

by Levy-Brühl⁶⁴ and other anthropologists, as occurring in certain primitive tribes. There we find that animals and birds are sometimes believed to be endowed with thought, emotion and other human functions. More than this, such inanimate objects as stones, mountains, or rivers are sometimes believed by these people to possess human potentialities. When we go one step further and consider the possibilities of similar experiences in more civilized types of people when acting under the influence of emotional or religious stimuli, where they are capable of endowing other individuals or even inanimate objects with their own hopes, beliefs, or thoughts, we can see how gradual the transition from the one to the other may be. As was stated above in discussing this form of experience in children, at the beginning, the child may still have the knowledge that the whole thing is within his own mind and does not occur in reality. Somewhere during this process, therefore, a transition takes place, which brings with it a loss of the proper differentiation between the subjective and objective. We do not know at present what the different stages of such a transition are in the normal person. In psychopathological material, however, we find cases that illustrate these intermediate steps. The whole process of change, from a condition where the subject-object differentiation is wholly preserved to the final step of the loss of this differentiation, cannot be seen clearly through all its gradations in all of these cases. Sometimes we find evidence only of some of these steps. Furthermore, in some cases only a certain stage is reached, and the process does not go on to completion; that is to say, it does not reach a total loss of the differentiation. Finally, cases are found where, even if the process is carried to completion, only certain of these stages come to the surface without any indication as to what their connection may have been to previous ones or what the outcome would have been had they not followed a certain definite direction. All of these phenomena that are found between the types of disturbances that were discussed before and those that we will discuss under the heading of disturbances associated with the loss of subject-object differentiation, can be grouped under the collective name of transitional states. The actual sig-

nificance and nature of these phenomena can probably best be appreciated as we follow their development in such cases:

The first case⁷⁰ to illustrate this process is that of a thirty-five-year-old married woman who was admitted to the hospital with the complaint of pain and discomfort in the abdomen and back. These had lasted for several years, and during one stage of her disease, after having had a series of consultations with physicians, she was taken to a sanitarium. The director of the sanitarium took the usual interest in this newly admitted patient, examined her, spent a good deal of time talking to her, and attempted to influence her to drop her unfounded complaints. He was a widower who had a young daughter living with him. The patient, who was unhappily married and was intensely dissatisfied with her husband, developed a strong attachment to this man from the beginning, and as she had always been of the day-dreaming type and possessed a rich imagination, she spent most of her time at the sanitarium thinking about the director and building up in her own mind various possibilities of a love affair between him and herself. For a long time she went on weaving her fantasies in this way but appreciating the fact that they were mere imagination on her part and that the man had actually given her no objective proof of his interest in her or of his being the cause of her interest in him. She even referred to these fantasies as "bad thoughts" that came into her mind and tried to rid herself of them. As time went on, however, she became less successful in banishing these thoughts from her mind even when she wanted to concentrate on other things. Later she began to pick up various minor points in the behavior of this man which would lead her to believe that he reciprocated her feelings. The attentions that he paid to her as a physician, which were not different from those he paid to other patients, began to be interpreted as meaning that he was interested in her. The very fact that he came to see her accompanied by his daughter meant to her that he was afraid to trust himself alone with her and that, therefore, he must have developed a strong attachment to her. This was the first step toward a decrease of the subject-object differentiation. When she now began to consider her own thoughts and attractions to the man and analyzed them in the light of her earlier rather strict moral code concerning the type of behavior expected of a married woman, and was conscious of her previous feelings of guilt for having such thoughts and fantasies, she began to lay the blame for these thoughts upon the man. At first it was just simply the idea

that he, having developed an attachment to her and shown indications of that attachment, had made her reciprocate. Very soon, however, she began to blame him for the specific thoughts that came into her mind and slowly built up a system of persecution in which she thought that this man had some power which she designated as telepathic, by means of which he actually placed certain thoughts into her mind. This continued even after she left the sanitarium and went home. Continuing with these fantasies, she now felt that he could influence her with his telepathic powers even though he was not near her. In her search for justification of such a belief and for reasons that would explain how such a condition was possible, she began to involve other people around her, considering them as agents employed by this man. When she came to the clinic she began to see such agents in the patients and staff at the hospital and gradually developed a series of persistent delusions concerning such influences upon her.

Here then we find a condition which started out as a disturbance in evaluation, dependent upon subjective contents, but with a preservation of the subject-object differentiation in that the patient appreciated the fact that all these thoughts were within her own mind even though she could not become the master of them. Through a series of stages, however, it gradually developed into a state where the subject-object differentiation was lost, and she accepted, as objectively valid, evaluations that really were dependent upon occurrences within herself. Another instance that showed these stages but where the process did not go quite to completion is shown in the following case: ⁷³

A boy of seventeen was admitted to the hospital with the complaint that he had a series of obsessive thoughts concerning his parents. These thoughts were in the form of "bad wishes" directed against them. He would, for instance, get the thought into his mind that he wished his father were dead. He knew that it was wrong to do so and also that he did not want to think these thoughts, but he could not put them out of his mind. At first he realized that these were only thoughts which occurred in his own mind, and he was able to rid himself of them for short periods of time by directing his thoughts along other lines. Very soon, however, they began to occupy his mind almost to the exclusion of everything else, and

he had to go through a series of elaborate ceremonials that were directed towards the turning of his attention to other things. He would kick the chair, hit himself, and do other apparently absurd things for that purpose. As time went on and these thoughts became stronger and of greater influence upon him, the very acts which he had previously undertaken to banish these thoughts from his mind began to be looked upon as representative of such thoughts. In this way kicking the chair, even though it was done accidentally and not for any specific purpose, served as an outward expression of such thoughts. Very soon different parts of his body began to be endowed with such potentialities. His hands, for instance, or his feet when placed in a certain way would in themselves represent such wishes. He went further than that and began to think that when he looked at the people who were the objects of the bad wishes, the look in itself was indicative of such a wish, and then he began to feel as if there were lines extending from his eyes in the direction of these people and that these lines represented the thoughts that he had previously had in his mind. Under analysis at the hospital the mechanisms of the development of these thoughts and the reason for their occurrence gradually became clear both to the physician and the patient, and the condition cleared up altogether so that at present the patient is free of any obsessive activities.

In this case we find in the first stage of the disease that the "bad wishes," although they are considered as isolated entities, are still looked upon as being dependent upon subjective factors and without any objective validity. As the process develops, however, they gradually begin to spread outside of his mind and objective values are built up first in his own body and then in the immediate vicinity of his body in the form of lines. All of these, however, were still related to himself, and in objectifying these subjective contents he nevertheless did not go outside the limits of his own personality.

A third case illustrating the beginning of such a transition but which was of a self-limited existence is shown in the following: ⁷⁰

A thirty-year-old married woman was admitted to the hospital because of a series of obsessive thoughts, chief among which were the thoughts of injuring her husband and children. These had existed for about eight years, having started shortly after her mar-

riage. During the early stages of the development of these thoughts, the following occurrence took place. She had just married a man who had proven unsatisfactory to her and was being taken to a new home, travelling on a train. She was standing alone on the rear platform of the observation car when she began to feel uncomfortable and had a vague feeling of anxiety. It suddenly occurred to her that the train seemed to have stopped and that the tracks, which until then seemed to have been running into one another as the train travelled on, stopped doing so. She knew that that could not be so, that they must be moving on, and yet the feeling that they had stopped could not be overcome. For a long time she debated in her own mind the reason for this feeling, and wavered between two decisions. On the one hand she had the feeling of certainty that the train was really not moving; on the other hand, the perceptions coming to her from the sound of the locomotive and of the wheels made her feel that it might not be so, and she had to admit the possibility of this being just a thought in her own mind. She finally decided that the second idea was the correct one and that for some reason she was having thoughts intruding upon her mind which made her evaluate things in a wrong way. This experience repeated itself on a number of occasions. At her new home, for instance, it occasionally occurred to her that the kitchen utensils, the people, the home, etc., were not real. At such times, too, she would waver between the thought that they actually did not exist and the one that these were just peculiar ideas that came into her mind. Here, again, the subjective nature of these thoughts gained the ascendancy and she came to look upon them in the light of obsessive thoughts. Later on, the same process took place in relation to her thoughts about killing her husband and, later, the child which was born sometime afterwards. There it was a matter of deciding whether the knife that attracted her attention was not endowed with some powers of making her want to take it into her hand and stab her husband or child, or that it really was only a thought in her own mind, and the knife, as such, had nothing to do with it. As years went on and these thoughts gained greater influence upon her mind, she finally discarded all ideas of the objective validity of her thoughts and settled upon the appreciation of these thoughts as being of an obsessive nature.

In this case there are only the first indications of transitional stages. They do not go to the extent of causing a loss of

subject-object differentiation, and in the final picture of her disease this function is totally preserved.

These various stages of transition from the one type to the other and the phenomena that are found in this field may be classified under three headings: (1) the exaggeration of the subject-object differentiation, (2) the objectification of subjective contents, (3) the decrease in subject-object differentiation.

The Exaggeration of Subject-object Differentiation

In close relationship to the considerations taken up in the discussion of the loss of the sense of reality, we find as the first step in the transition an exaggeration of the normal differentiation between what is subjective and what is objectively valid. We find phenomena of this type in normal persons, although the more marked types of disturbances in this direction are to be observed in cases of mental disease. One of the most frequently encountered phenomena of this type is manifested as a special feature of the phenomenon of doubt. This aspect of doubt is the one that deals with the decision concerning the reality or objectivity of observed contents. We frequently find that the phenomenon of doubt arises on the basis of the fact that the person cannot make up his mind definitely as to how many of the reasons that lead him to a certain decision have actual basis in fact and how many of them may be only imagined. In attempting to decide, the person may go to all extremes of an exaggerated search for the proof of the objective validity of a given content. Various degrees of hair-splitting and *Gruebelsucht* to secure the ultimate perfection of such proof may be found in some normal persons as well as in cases of abnormal mental activity. The development of some schools of skepticism in the different fields of human thought may be regarded as representative of this type of the exaggerated search for differentiation. The philosophical searches of Descartes for proof of his own existence, the struggle between nominalism and realism in the ranks of the scholastics, may be looked upon as examples. It does not matter whether such a

search is pragmatically useful or not, whether the person finally ends with finding solid ground on which he thinks he may rest, or whether, in the manner of Ecclesiastes, he finds that it all is futile and nothing can be certain. The very act of searching in such an exaggerated fashion for this proof is indicative of a tendency toward differentiation in excess of that which we find in the average person.

In both the normal and abnormal phases of this phenomenon the person is necessarily led to a pronounced degree of *introspection* and to a more or less marked juggling with terms. The deep and earnest efforts of the philosopher in this direction need not and do not accompany these manifestations in other individuals. Thus in certain abnormal persons we find this function reduced to an empty shell of words, where, under the surface, the doubt and constant search for objective validity and ultimate truth may degenerate to shallow and bodiless expressions. Examples of this kind are found in a number of cases of psychopathological reactions. The person appears to take a great deal of pleasure in deriding the objectivity of any human experience. Picking up words and juggling them around, usually in a rather superficial fashion, he may arrive at the conclusion that whatever a person's reactions are, they are only within his own mind and do not exist in actuality. Therefore, there is no use going on, there is no use of putting out any effort, and so on. A typical example of this form of reaction is found in the following case:

A boy of twenty-one, of mediocre intelligence and unprepossessing appearance, who had played the part of a male Cinderella in a group of fairly successful siblings, decides to study engineering with the secret ambition of becoming a great inventor. Shortly after his entrance into the university, after having done only fairly well in his class work, he decides that engineering is, after all, nothing more than a glorified trade, and transfers to psychology, with the broad programme of investigating the depths of the human mind. Here he is very soon disappointed. The prosaic humdrum of freshman psychology, laboratory work, etc., do not appeal to him as being very "promising," and having picked up such words as "reality," "existence," "ultimate goal," etc., he comes to the decision that

philosophy would be the answer to his ambitions. A short course in the history of philosophy and a superficial skimming of a few books, aided by one-sided discussions with some of his classmates, suffices in giving him the feeling that he has seen enough of what there is to know. No philosopher or scientist seems to him to have accomplished anything "really" worth while, none of them has actually found any "ultimate truths," and, therefore, there is nothing to it all. He loses whatever interest he had in his classes, fails in the examinations, starts talking about the futility of life, and says that the only solution is suicide. He is finally referred to a psychiatrist. In the interview he shows a remarkably superficial acquaintance with the subjects he has studied and covers it up with the use of a number of stereotyped phrases concerning philosophy, and with an air of supercilious boredom with life in general.

The directions which may be followed with this as a starting point differ with various types. With many people this phenomenon may go no further than that of the case mentioned above. Such a person may manage to make a partial social and financial adjustment, or he may fail entirely and become a burden to the community, with his doubts in either case remaining in the form of words, without any serious attempt to reach a solution. Others may go on to extreme solipsism, decide that nothing in the world has any actual objective value, that the human mind is incapable of grasping real values, etc. They become cynical, disinterested, and may get into serious interferences in their adjustment by disregarding what the average individual considers as solid objectivity. In a number of instances it may end with a complete turn about and the assumption of an attitude that if everything outside is only subjective projection, then why not believe that *all* subjective experiences are really objective? Sometimes, however, the person retains, in spite of himself, a certain inherent sense of differentiation, and his adjustment can be established on a nearly normal basis with the acceptance of a philosophy of the type advanced by Vahinger,¹⁰⁶ the so-called philosophy of the *als ob* (as if). In other cases, however, it may be the starting point of a forcing of subjective contents into objectivity and may lead gradually to a loss of subject-object differentiation. Even here, especially if the person is fortunate enough not to remain

consistent, a normal adjustment is not excluded. Examples of this are found in various cults of the present day, such as auto-suggestion, and others. If, however, the person remains consistent in this attitude, he will fail to see any difference between what is subjective and what is objective and begin to see things happening outside himself that are really his own projections. The first steps in this direction can be seen in the second group of phenomena in this field.

Objectification of Subjective Contents

We have seen a clear example of this type of phenomenon at the highest peak of the disease-process in the second case quoted in this chapter (v. p. 227). This patient, as we saw, was capable of considering some parts of himself as objective or autonomic entities. This phenomenon need not be a link in the chain of events leading from obsessive thought to complete loss of the subject-object differentiation. It may occur as a distinct phenomenon without, as far as we can see on the surface, any relationship to preceding or subsequent events. In itself, it consists of a splitting off of certain components of the subject, psychic or somatic, and an evaluation of them as objectively existing entities. Still within normal limits we find this phenomenon in the *self-conscious* and *self-observing* individual. In their exaggerated phases these two phenomena may lead to a more pronounced splitting of the individual into observing and observed components in which the person, so to speak, abstracts this observing component out of the rest of his "self" and observes the latter as if it were an objective entity. In this phase the person considers the observed component in the same way as an outsider would do, notices various peculiarities, objectionable or desirable characteristics, judges them or suffers over them, but keeps them outside of his inner personal ego. It is in this manner that the patient referred to above regarded his "wishes," his hands or feet, his looks, and finally the lines that extended from him toward other individuals. It must be remembered that a certain preservation of the unity of the personality as opposed to actual objectivity is

still present. Whatever the objective nature of these things may be to the observed ego, they still are considered as in some way connected with his own personality and not actually belonging to the environment.

A somewhat similar although more pronounced form of this phenomenon is found in the cases of *multiple personality*. The person changes from one personality to another, each characterized by the most diametrically opposed features. He does not, during his functioning in the one personality, remember anything concerning the other, but will, in most instances, know that some part of *his* life has dropped out of his everyday existence, and although a certain objective quality is attributed to that isolated sector of the personality, it is admitted to be an inherent part of himself, even though it is strange to him. Examples of this type of phenomenon were described particularly well by psychologists of the French school such as Janet and Azan, and by the American psychologist, Morton Prince. A similar situation is found in some forms of *amnesia*. Whether the person during the amnesic period has acted as he is accustomed to act, or as an altogether different personality, that portion of his life, even though it is blank to him, is still recognized as having happened in *his* life. He may come to himself with a dramatic gesture of "Where am I, what am I doing, what has happened to me," but he still asks these questions in relation to himself.

This objectification that, in multiple personality and in amnesias, is undertaken in relation to the individual as a whole, may be taken in regard to some special content, either psychic or somatic, in the individual. We have already referred to it in connection with the above-quoted case. A group of phenomena which are closely related to these is found in the so-called *hysterical conversions*. In these cases the person may be regarded as detaching a part of himself from the rest of his personality and considering it as objectively different from its usual state. An arm may thus be considered as devoid of function. It cannot move nor can it feel. When it is pricked by a pin the person will observe it in an objective fashion and will show no signs of having experienced a painful sensation. If he

wants to move it, he will pick it up with the other hand and change its position as if it were a foreign object over which he had no power. In this group are included such phenomena as "hysterical" paralysis, anesthesia, and analgesia; the loss of the function of the voice (hysterical aphonia), of the eyesight (hysterical blindness), and numerous others. In all of these we find an objectification or isolation of a personal content where a differentiation appears between it and the rest of the contents of the personality. Nevertheless the person will still refer to the arm as his own, and a certain amount of relationship remains between the rest of the personality and the objectified content. The paralyzed organ may be further objectified in that it may assume an autonomic existence. Under suggestion from the outside the paralyzed arm, for instance, may pick up a pencil and write. The person then observes this phenomenon as something that is going on outside the narrow circle of his own personality, as if the arm were a completely autonomic unit that functions by itself and in no relationship to his own will.

In its further development this phenomenon may reach the point of a complete loss of differentiation between subject and object in that the arm may be considered as belonging to someone else. One patient, for instance, felt that one of her legs was not really hers, that it had acquired masculine characteristics and was actually her father's leg. These organs may even go on to the assumption of more completely autonomic existence in that they will move and act not simply on suggestion by some outsider but as acting on their own account. The voice may utter words which the patient believes are placed there by some outsider, although there is no objective proof that an outside person has actually done so. Psychic contents may also assume similar autonomic existences. Thoughts may be considered as carrying on an independent existence, either on their own account or being forced into the mind of the patient by others and retaining an autonomic existence within the personality of the patient. An example of this was found in the first case presented in the beginning of this discussion (v. p. 226). Thoughts may come and go in an autonomic fash-

ion as if they were tangible objective entities. Some person on the outside may be abstracting thoughts from the patient or may be introducing them into his head in some way. Finally these thoughts may assume the qualities of voices within the head of the person. This leads us to the consideration of the next stage in this transition, which is the last one preceding the consideration of the actual loss of subject-object differentiation:

Decrease in Differentiation

As was emphasized above, the disturbances occurring in the first two stages discussed still remain chiefly within the personality of the individual. Whether the differentiation is exaggerated or subjective contents are rendered objective, there is as yet no attempt in most of the phenomena to include the outside objectivity in this process. In some phenomena, however, even where the subject-object differentiation is not altogether lost, we may meet with the beginning of that process; that is to say, with a decrease of the differentiation or the beginning of an obliteration of it. In the normal individual this is illustrated in the phenomenon known as *day-dreaming*. Most normal persons are acquainted with this phenomenon as occurring within themselves to some extent. When a person is left to himself in a quiet, comfortable position, he may drift off into a consideration of occurrences that have taken place before or of those that he would like to see occur, and during that process may for a short period of time, in his imagination, see these things as occurring objectively. The downtrodden, oppressed employee may see himself standing before his employer and telling him the things he would really like to say to him. For a moment he may even indulge in the belief that this is actually taking place. In the normal individual, however, these day-dreams or *fantasies* are fleeting and temporary in nature, and any touch of the hard facts in life will bring him back with a start to the realization that he was only dreaming.

An interesting phenomenon in this connection is that designated as *pseudologia phantastica* (pathological lying), which, by some people, has been referred to as "day-dreaming aloud."

In some of these cases certainly we can see that the confabulations invented and communicated are actually representative of wishes. The person repeatedly tells them to other people and may find himself actually believing that they are true so that, for the moment, the subject-object differentiation is obliterated. A large series of such phenomena may be found both in normal and abnormal individuals. Day-dreaming in the abnormal individual may go on to influence his entire mental activity. Even though not wholly believing that the occurrences he is imagining are objective, he may occupy himself in this way to such an extent that he is unable to concentrate on the activities necessary to a proper adjustment. This dreaming of imaginary things, in spite of the necessity of bringing oneself to the realization of actual values and contents, is also sometimes found in the phenomenon referred to as *autistic* or *dereistic* thought. Such contents originating within the person may go on toward further development, and as they pass over into the field of complete loss of subject-object differentiation they may be projected to the outside as actually having occurred. Where the patient still retains a certain amount of critical attitude towards the idea we speak of the latter as *autochthonous*.

We must mention here another group of phenomena, in which a temporary decrease or loss of differentiation may occur under special conditions, but will disappear when the conditions are removed. The hallucinations and delusions induced during hypnotism, the experiences one encounters in spiritualistic séances, trances, crystal gazing, etc., are examples of this type of temporary disturbance. It may develop, as it does in hypnosis, on the basis of suggestion by others, or it may be due to *auto-suggestion*. In the latter we may find that the person actually believes that he possesses certain unusual attributes—such as the power of clairvoyance, mental telepathy, or contact with the spirit world. Discounting the frequently occurring falsifications of such performances, we do find cases where the person actually believes himself possessed of these abilities. When this occurs only in relation to the particular setting where the medium may go into a trance at a séance, but otherwise lives his life under the ordinary rules, we would still con-

sider it as a phenomenon of temporary nature and as only a decrease of differentiation. Beliefs of this type, however, may remain with the individual under all conditions, and we have the formation of *delusional* ideas.

More consistent although less pronounced disturbances of differentiation may be found in such reactions as suspicion, jealousy, etc. Here we can sometimes follow the development of the phenomenon through a series of stages, ranging from features that are well within normal limits, to those that are definitely pathological. We start with the commonly encountered suspicions of the person who, being conscious of some peculiarity in his appearance, feels that other people are interested in observing him. He may then begin to look for evidences of this interest and interpret the most irrelevant remarks or gestures as signifying such an interest. Some persons may, under such conditions, preserve the ability to appreciate that these are only subjective evaluations. Others may become incapable of such critique and accept these signs as objectively valid proof of the fact that people are ridiculing them, a phenomenon which again leads us into the field of delusions. The same is true of jealousy where, without any objective reason, and on the basis of a purely subjective fear, anticipation, or suspicion of infidelity, a person will develop a conviction that his mate is unfaithful to him. Another manifestation of this disturbance is found in certain types of identification, where a person acts and feels as if he were someone else. Frequently when forced to face the actual facts, he may admit either to himself or to the others that he has been playing a part. But the process may reach the state of actual *appersonification*, which consists in a permanent identification without the ability to recognize the subjective nature of the process. Thus patients suffering from mental disease may identify themselves with and actually believe that they are such persons of fame as Napoleon, Washington, and others.

In most of the phenomena discussed here, especially those that have not reached the stage of complete loss of subject-object differentiation, the person is still capable of taking a critical attitude to the experience, and no matter how vivid it

is, will be able to see that in reality it is not possible. This is clearly seen in the case of the so-called *déjà vu* and *déjà vecu* phenomena. Both of these may be found in normal persons. A person upon finding himself in a totally strange situation may have the feeling that he has, on previous occasions, seen some of the objects (*déjà vu*) or experienced some of the occurrences (*déjà vecu*) in this new situation. This feeling may be extremely vivid and convincing, but as long as the person retains his ability of critical judgment, he can by a process of logical reasoning dissuade himself from such a belief.

Chapter XVII

DISTURBANCES IN EVALUATION: (C) WITH THE LOSS OF SUBJECT-OBJECT DIFFERENTIATION

THROUGHOUT the discussion of the transitional types of disturbances in evaluation we have emphasized the close relationship that exists between them and the phenomena that are characterized by the loss of the subject-object differentiation. One must not, however, carry this too far and expect to find in each case a series of stages ranging from the disturbances where this differentiation is preserved, through the transitional stages, into those where the differentiation is completely lost. Furthermore, one cannot classify these three types of disturbances on the basis of the degree of seriousness in interference with adjustment for which they may be responsible. It is true that, on the whole, the disturbances in evaluation that were considered so far are less serious in nature and not quite so far removed from normal as those that we are to discuss now. This, however, is not always so, for on the one hand we find the rudiments of the loss of differentiation even in normal individuals, and on the other hand the disturbances in evaluation where this differentiation is preserved may seriously interfere with the adjustment of the individual and may frequently, as for instance in some cases of psychasthenia, defy all attempts at treatment and continue on a progressive course.

Then, too, the phenomena which we will discuss in this chapter do not necessarily represent the final stage in the development of those that we have discussed in the two preceding chapters. In fact, most frequently, they seem to come to the surface without showing any preceding stages of the transitional type or of the one where the differentiation is still pre-

served. Finally, in some cases we may find all of these manifested in the same individual at the same time as, for instance, could be seen in the case of the first patient quoted in the last chapter during some of the stages of her disease. The conditions to be discussed here can be taken up under the following headings: (1) disturbances that are related to the outside world, (2) disturbances related to contents within the individual.

Disturbances in Relation to the Outside World

The rudiments of this type of disturbance can be frequently noticed in normal individuals. Let us, for instance, consider first of all the process of *identification*. There is scarcely any normal person who during his life has not in some way or another identified himself with other persons. By that, we do not mean that he has actually consciously thought that he was another person, but that in his behavior or experience certain phenomena have manifested themselves on the basis of their characterization of other individuals. The boy who respects and admires his father may gradually get into the habit of acting in the same way as the father does, and, as he does so, unconsciously identify himself with the father. Some of these types of activity may become so deeply rooted in the personality of the individual that when he grows up he may still retain them throughout his life. Similarly, the normal person shows phenomena of this type in relation to other persons whom he respects, admires, or even hates. The servant may imitate his master, the pupil his teacher, the employee his employer, and so on. These identifications may take place without the person's conscious appreciation of the fact that he is behaving in such a way because of identification.

They may, however, become more exaggerated, and as they do so they may reach the point of complete identification or *appersonification*. The patient in a mental hospital walking around with his head lowered and his hand stuck inside of his lapel not only attempts to behave like Napoleon, but actually believes that he is Napoleon. Here then we have reached a

point where the subjective evaluation of a situation has been transferred into a deeply rooted conviction that it is also objectively well-founded. A belief of this type is known as *delusion*. We must emphasize here that delusions may differ in their degrees of intensity. In the case of the playful, mischievous statements of the excited "manic" patient it may be just a carelessness with words that causes him, in his exalted state, to express this feeling in some such manner as, "I am very strong," "I am stronger than anybody around here," "I am Jack Dempsey." Just how much of actual belief there is that the person is Jack Dempsey or how much this is simply a figure of speech remains a question. On the other extreme, we have the person who under all questioning remains adamant in his conviction that he is the person he claims to be.

Delusions may be of different types, conditioned by a variety of factors. We have already spoken of the delusions that are related to identification. Similar forms may develop in relation to sensitiveness and suspicion. Thus some persons may develop delusions on the basis of several repeated failures in their enterprises. Instead of searching for reasons for these failures in their own mistakes, they look for them in outside sources, in the form of some enemies who are actually placing obstructions in the way. In their desire to find evidence of this, they begin to interpret innocent remarks or indifferent gestures as pointing in that direction. They assume that certain words confirm their suspicions, and although at first they may be aware of the fact that this is only assumption, these assumptions soon acquire the validity of actual occurrences, and a delusion of persecution is built up. Similarly this is true of the delusions of jealousy. The first rudiments of the delusion, as in the case of suspicion and sensitiveness, are found in normal individuals and may go on to certain exaggerations still within normal limits. It is when assumptions are taken for objective proof that the abnormal and distinctly pathological begins to emerge from that which is still within normal limits.

The variations of delusions, as well as their ramifications, are too numerous to be discussed separately. Various possibilities may be encountered in the ramifications of the phe-

nomenon. Thus we speak of *delusions of influence*, when the person believes that he is being influenced by other individuals to act in a certain way; *delusions of reference*, when the person considers irrelevant occurrences as related to himself; *delusions of persecution*, when the person believes that he is being persecuted, etc. Quite frequently they are accompanied by hallucinations, in which case the two phenomena act in a mutually supplementary fashion. It must be emphasized that this concept of the development of a delusion on the basis of certain rudiments found in normal behavior is an arbitrary one, and although occasionally we may find that delusions develop in such a manner, they do not necessarily have to take this course. We find frequently that delusions of certain types suddenly crop up without any premonitory signs. Above everything else we must guard against taking it for granted that a specific delusion expressed by a patient must have developed in any certain way, simply because we have found other similar delusions with such a development.

The chief feature which characterizes delusional formation and distinguishes it from the other disturbances of evaluation is the involvement of the outside. The person forces into the outside world contents which do not actually exist there, or at least, for whose existence he has no valid objective evidence. This process is also known under the term of *projection*, and in psychiatric nomenclature we speak of this type of mental activity as *paranoid*. Paranoid ideas or projections vary in their complexity and scope from isolated specific sectors of the situation to the inclusion of everything in the life of the individual. They need not be concerned with occurrences at the time of the manifestation of these ideas. Quite frequently we find that the person will evaluate occurrences that have taken place a long time ago and at a period when the person still had a normal standard of evaluation, in the light of his present delusions.

The systematic nature and consistency of these delusions vary with different types of conditions. In some cases, the person develops a highly systematized and, within certain limits, almost flawless series of steps which are centered about some

special point of interest. In these cases we find that, granted certain first premises (which, of course, are not objectively true), the rest of the structure based on these shows no fault in judgment and comprehension. Each point that is added is done so in a logical and intricate fashion, and it is very difficult to prove the absence of relationship of these points to the system in question. In such cases we find that the person shows very little, if any, deterioration of judgment, the only flaw in the structure being that he accepts as a basis for his reasoning a fact that is not objectively true. Furthermore, in matters not directly pertaining to his particular set of delusions such a patient may reason without any fault in judgment. Such a person may go on weaving his system for years in a patient and consistent manner without showing signs of any apparent decrease in his logical thinking. Clinically these cases are known as *pure paranoid*s. More frequently, we find in the formation of delusions a more pronounced degree of looseness of thought. In some cases the delusions may be fleeting in nature, disappearing under certain conditions to give place to entirely new forms. In other cases they may be more persistent, the patient adhering blindly to the delusion without any attempt to reason it out either to himself or to outside observers. We also distinguish ideas of this type that have some intelligible emotional background from those that appear to come from nowhere and have no logical relationship to the stimuli that have given rise to them.

Disturbances Related to Internal Contents

The fact that delusions are characterized by an involvement of the outside does not necessarily imply that they cannot be developed in relation to internal contents. As a matter of fact, we find ideas of this type developing in relation to some contents within the individual without the involvement of the objectivity of any special outside factor. Psychic or somatic contents may thus gain objective characteristics and at times it may be difficult to differentiate them from the phenomena that we discussed in the previous chapter in relation to the establish-

ment of autonomic existence for certain contents within the individual. The main difference between the two lies in the fact that not only is an autonomy established for the particular content, but it splits away altogether from the personality of the patient and is endowed with an independent existence wherein it may, in a secondary fashion, affect the individual or other people around him. The person may, for instance, believe that his thoughts can gain entrance into a broadcasting apparatus, and that he can thus listen to his own thoughts being broadcast all over the country. Similarly physical contents, different parts of the body, or the whole body as such, may be looked upon as automatons that may go on leading an existence of their own, acting and behaving in an independent manner without the patient having any relationship to or power over them.

We have already referred to this type of occurrence in one of the cases quoted in the discussion of the sense of reality (v. p. 205). There the patient spoke of his arms and legs not being his own although he did not refer them to anybody else. They move by themselves on hinges and would do things that the patient could not understand. His eyes and teeth were not his own, although they may have been at one time, but they have changed and now cause him to see and feel things that he does not himself want to experience. Another patient spoke of her body changing in some way. At one time half of her body became that of her father. The leg on the one side could move in certain ways, assume certain positions which then made her think certain thoughts that were distressing to her. This change was not only a matter of relationship to this organ, but she actually claimed that the organs became larger and coarser in such a way that they looked to her like her father's. Whole systems or even the whole personality may thus be considered as changed. Thus, for instance, the functioning of the thought processes in general may be regarded by the patient as having changed. He may speak of his thoughts as having certain superhuman power but he himself is as subject to this control as are other individuals. This *omnipotence of thought* may then in itself give rise to other disturbances in evaluation. The per-

son may, in attributing such powers to his thoughts, begin to develop ideas of vast importance or *grandeur*, and when he finds that other people do not recognize them, he may retreat into martyr-like solitude, and from there begin to weave delusional ideas of suspicion that people are jealous of him and that they are persecuting him because of this jealousy. Ideas of grandeur concerning one's own ability may also be developed in relation to physical prowess. With different degrees of naïveté the person may consider himself as the strongest, most powerful, sexually most potent, tallest, and so on, person in the world.

A special sector of evaluations of this type in relation to internal contents includes those spoken of as *somatic delusions*. Here the person, either on the basis of some minor sensations or without such basis, develops the conviction that certain organs within him have changed in their function or in their structure, or that they have disappeared altogether. Thus a person will speak of his heart being gone, his brain turning into water and escaping through his nose, his stomach having rotted away and the remains gotten rid of through his bowels, and numerous other such ideas.

Chapter XVIII

PHYSIOLOGICAL CONCOMITANTS

IN THIS chapter we wish to discuss a series of phenomena which are very closely related to the mental activities discussed above, although the exact nature of this relationship is not fully appreciated. They consist of certain physiological manifestations in different organs of the body which seem to be associated with some phenomena either of experience or behavior or both. The secretion of tears in association with the experience of sadness, the phenomenon of blushing that may be associated with bashfulness, the pallor we see in fear, etc., are some examples of these manifestations. Physiologically these phenomena have been studied quite carefully and, as a result, certain relationships have been found to exist between them and the functions of some of the glands of internal secretion ⁴⁰ and certain parts of the central nervous system. One gap which we cannot bridge as yet is the actual relationship that exists between the psychologically appreciable mental activity and this change in physiological functioning. The consistency with which certain types of physiological changes seem to be associated with certain forms of psychological activities would lead us to assume that this association must be more than a mere coincidence. This has not as yet gone beyond the stage of hypothesis, however. Some have advanced the ideas that the physiological change precedes or even causes the psychological content (the *James-Lange* theory). Others have felt that the mental activity itself sets these physiological phenomena into action in order to achieve a certain purpose. Both of these are only hypothetical and have not reached the state of experimentally proven facts.

An appreciation of these concomitant phenomena, however,

helps us very much in our work in psychopathology. Frequently they may give us definite clues as to experiences occurring in the individual which we cannot otherwise observe and which the individual fails to communicate to us. Since some of these physiological changes are consistently, if not exclusively, associated with certain emotional contents, then, pragmatically, we can assume that in most cases, where we observe a certain physiological change, there may also be an associated experience. Furthermore, in our attempt to understand the physiological mechanisms and determinants of behavior and experience these concomitants, since they do bear such a close relationship with the mental activities and are at times more easily approachable on an experimental basis, may help in leading us to the physiological mechanisms. At present we wish to restrict our discussion to the description of those physiological concomitants that are associated with some of the phenomena discussed in the previous chapters. We cannot here go into the complexities of the physiological fundamentals concerned in these phenomena. For this purpose we refer the student to texts on physiology and experimental psychology. The changes that are noticed in these functions may be discussed under the following headings:

(1) *Respiration*. Normally each individual has respiratory movements of a certain depth, regularity, and rate per minute, and the relative proportions of inspiration and expiration remain within established limits. Furthermore, average normal persons do not show any very wide variations from one another in these respects. Under certain conditions, somatic or psychic in nature, these limits may shift, and in judging the change in these characteristics of respiration in their relationship to changes in mental activities one will first of all have to exclude the possibilities of somatic influences whether they be of normal or abnormal nature. Psychic influences upon these manifestations may also occur in normal persons. During speech, for instance, these characteristics of respiration change materially and in a definite way, and emotional factors of different types may exert a powerful influence upon them. Psychopathologically they may be still further influenced either

in the form of exaggerations of these normal emotional fluctuations or the occurrence of new relationships that are not usually found in the normal individuals. Fear, anger, intense interest and concentration in certain subjects, depression or elation, anxiety, and numerous other conditions may influence the rate, the depth, and the amplitude of respiration as well as the relative proportions of inspiration and expiration.

(2) *The cardiovascular system.* The beat of the heart as it sends the blood circulating in the vessels throughout the body sets up pulsations in these vessels, and in the radial or maxillary arteries, which reach the surface of the body, these pulsations can be measured and recorded, thus giving us a picture of what takes place within the cardiovascular system. Here, too, the rate, the amplitude, the volume, the regularity, and the force of these *pulsations* normally vary within rather narrow limits. We must remember also that somatic interferences may influence these characteristics to a great extent. Provided these are excluded, we then find changes in these characteristics occurring concomitantly with certain phenomena of behavior and experience both in the normal individual as well as psychopathologically. The pressure behind the volume of blood that is sent through the vessels is referred to as the *blood pressure*, and it may undergo changes on the basis of disturbances in the mental activities of the individual.

These factors—the respiration, pulse, and the blood pressure—seem to be very definitely related to one another both under normal and abnormal conditions, and a great deal of information can be obtained by a simultaneous study of them. For that purpose an apparatus known as a *polygraph* has been devised which enables us to record on a revolving drum the simultaneous changes in all three of these functions. Although the possibility of influences even of a psychological nature upon these functions is very great, nevertheless experimental studies of the subject have shown that certain types of graphs obtained in this way are very consistently associated with definite psychopathological phenomena. It is doubtful whether all that is asserted in this direction is true. The ability that some proponents in this field claim to differentiate certain types

of mental disease on the basis of these graphs has not been substantiated. With certain distinct phenomena, however, this diagnostic reliability increases to a point where one can predict with a safe margin of probability that when certain types of graphs are obtained, the existence of a special psychopathological phenomenon can be assumed. One of the best known applications of this method of observation has recently been brought to light in relation to *lie detecting*. For further information on the subject we would refer to a recent publication (J. Larson).⁶³ Whatever the reliability of this method of observation may be, it must be remembered that it is best to consider it as not altogether infallible, and not to make any dogmatic statements simply on the basis of a graph of this type.

(3) Closely related to these phenomena are the changes in the color of the skin which depend upon variation in the size of the blood vessels and the amount of blood in them. *Pallor* and *blushing* have from time immemorial been associated with concomitant psychological phenomena such as bashfulness, embarrassment, or shame, and sometimes the blushing may be the only positive observable sign of such experience. In anger or in fear the person may show pallor. Furthermore, certain types of psychopathological phenomena are associated with irregular blotching of the skin, especially of the face and the neck, where irregularly shaped areas of blushing occur against the background of a paler color. This may remain consistent or may only be of a fleeting, temporary nature.

(4) The physiological activities of the *secretory* and *excretory* organs may also show certain changes associated with psychopathological phenomena. One of the most easily observable and commonly occurring phenomena of this type is the secretion of the glands of perspiration. Under certain exaggerated or abnormal forms of mental activity the person may begin to perspire profusely, either all over the body or in certain special parts of it. The association of the secretion of tears in relationship to sadness, depression, or pity is also a well-known phenomenon. In all of these phenomena we must bear in mind the possibility of a disturbance in relationship

between these physiological functions and the psychological occurrences that are known to be associated with them. There may be an increase or decrease of this functioning as a result of a change in the related psychological phenomena. There may also be a dysfunction in this relationship in that the physiological phenomena may occur in association with psychological activities of a diametrically opposite nature. Other changes in function of the secretory organs, while not so easily observable, may be demonstrable as concomitant phenomena associated with psychological activities. The functions of the adrenal gland, of the pituitary, of the salivary glands, and numerous others can thus be associated with, and by some have even been regarded as causative of, certain psychopathological forms of behavior and experience.⁴⁰

(5) *Electrophysiological changes.*⁵ a) *Action currents.* In association with the function of the organism as a whole or its different systems, certain changes in potential take place which give rise to electrical currents in the tissues related to these functions. When the given function is in any way disturbed, changes in these currents may be observed and utilized either in the diagnosis of such changes or in our investigation of them. Of the more thoroughly investigated phenomena in this field we wish to refer first of all to that of *action currents*. The subject of action currents has become, within recent years, such a broad one that a complete discussion of it is beyond the scope of this presentation. It is sufficient to state that the rate of these currents, their amplitude, their regularity, and so on, have been found to be associated with certain forms of psychopathological as well as somatopathological changes. Deviations from the normal in action currents have been observed in the affected organs in cases of catatonia, hysteria, under hypnosis, and so on. In all of these we have to remember that actual organic disease in these organs may also produce definite changes, and before we proceed to consider a change in action currents in a given organ as being associated with a psychopathological phenomenon, we will have to be certain that organic disease has been excluded. Of the other changes in electrophysiology we might briefly mention the following:

b) *Disturbances in intensity.* It has been discovered that in electrical stimulation of muscle, nerve or gland tissue, a reaction can be obtained only if the current used is above a certain minimum intensity. Where the function of the particular tissue is for some reason interfered with, a greater or lesser intensity will be required to produce a reaction. In addition to actual organic disease of these tissues, psychopathologically conditioned disturbances may cause changes in the threshold.

c) *Chronaxy.*^{16, 71} This is a term applied to the duration of an electrical current necessary to produce a reaction in a given tissue. Where for some reason the function of the tissue is interfered with, the chronaxy may be changed also. Thus, psychopathologically conditioned changes in function may be accompanied by increased or decreased chronaxy or by changes in the interrelationship of the chronaxies of different organs.

d) *The psychogalvanic reflex.* Within the last few years a great deal of work has been done on the effects of emotional experiences upon the so-called "psychogalvanic reflex." The results in this field are not altogether convincing and serious doubts have been expressed by some observers as to the reliability of this method and even of the nature of the changes observed. For further details on this subject the reader is referred to the numerous publications, some of which are mentioned in the bibliography.¹⁰⁸

(6) *Pharmacodynamics.* The above-mentioned physiological phenomena as well as the acts of behavior or states of experience with which they are associated, may be definitely influenced by the administration of certain drugs. In normal persons certain drugs usually produce some specific changes. In psychopathological states we sometimes find disturbances in these specific reactions to drugs, as well as newly-established phenomena. The effects of drugs in producing such changes and their relationship to these changes will be further discussed in the section on determinants of psychopathological phenomena. At present, however, we wish to refer only briefly to the uses of drugs in the investigation of psychopathological conditions. We may administer the drug, first of all, for the pur-

pose of ascertaining whether the person's reaction to this particular drug is normal or otherwise, the most useful drugs in this respect being cocaine, hasheesh, mescaline, and sodium amytal. Second, we may use the drugs for the purpose of gaining insight into the conditions investigated. Some drugs seem to influence the state of contact between the patient and the investigator, allowing freer accessibility into the patient's experiences. Sodium amytal and cocaine, in certain doses, influence in a decided fashion the freedom with which certain patients will talk about their problems, and at the same time render them more receptive to the therapeutic efforts of the physician.^{8, 65}

PART III

DETERMINANTS, PATHOGENESIS, AND
RELATIONSHIPS

Chapter XIX

PHYLOGENETIC DETERMINANTS

Concerning the Causation and Manner of Development of Psychopathological Phenomena

THE DISCUSSION of the causes and development of the phenomena described in the preceding chapters offers certain difficulties in approach, not only because we are at present unable to state the exact nature of these in a large proportion of the material, but also because it seems impossible to present it in a systematic fashion on an etiologic basis. These two obstacles not only combine to make this presentation difficult, but appear to act as mutually supplementary in establishing a vicious circle. If we were able to make a definite statement concerning the causes of most of these phenomena and the manner in which the disease process develops until it reaches the picture with which we are confronted, a systematic presentation of this subject would be rendered comparatively easy, for we could present the material by classifying the phenomena according to their determinants. As it is, however, the psychopathological phenomena, the causes and manner of development of which are clearly understood, are remarkably few in number. In a large number of the phenomena discussed above we are as much in the dark as to their causes as we are concerning their manner of development. In others we may know the cause but cannot see any clear picture of the development, and in still others the development may be understood and yet we do not know the starting point.

With such a situation it becomes difficult to present what we do know about these contents under any general system. To discuss each one of the phenomena or each one of the groups

of phenomena that we have described above in the light of what we know about their etiology and pathogenesis would not only make a disjointed, unsystematic form of presentation and obscure the relationships that may exist between the different phenomena themselves, but would be impracticable since similar or related phenomena may have different causes and different forms of development, and vice versa. It would seem, therefore, that the only solution to this problem would be to find some fundamental issues to which we could reduce all the known causes and forms of development, and also those factors which, from the very nature of psychopathological phenomena, could be considered as necessarily elementary in all possible causes and pathogeneses that we do not as yet know. This may seem paradoxical at first glance, because, not being in possession of all of this knowledge, it would seem impossible to be able to ascertain the categories into which all of the known and unknown possibilities would necessarily fit.

Some psychopathologists have attempted to obviate this difficulty by classifying all possible causes and forms of development according to some principle which seems to be characteristic of those that we do know. Such an attempt is, for instance, the one suggested by Jaspers ⁴⁶ when he attacks the problem not from the point of view of the nature of the phenomena in themselves, but in the light of our own attitude to them. He classifies causes and manners of development of psychopathological phenomena into the so-called *understandable* and *explanatory*. By that he means that in the cases of some abnormal mental activities, when the actual causes may not be known, we can understand logically why and how this has taken place. In others, however, we can explain even though we cannot understand. That is to say, we know that a certain form of mental activity follows the occurrence of a certain series of factors, although we do not understand exactly why or how. With the second group we usually proceed in an empirical fashion in that, having observed that a certain phenomenon repeatedly follows a given set of factors, we deduce that these factors may be causative. We do not need, nor are we usually

capable of, a definite understanding of how or why these particular phenomena should be caused by the special factors.

That this is a purely theoretical and descriptive form of classification is clear, and is admitted by some of its proponents. Whether it is pragmatically tenable or useful is another question. To begin with, historical developments in psychopathology show us that what at one time could have been considered merely as an explanation of a given set of circumstances in its relationship to certain psychopathological phenomena, has subsequently by investigation developed into a clearly understandable grasp of the relationships between the causes and their effects. We could argue, therefore, that, even though at present there are large numbers of psychopathological phenomena in which the causes and manners of development can only be explained, we are justified in looking forward to a time when further research, by giving us better insight, will give us an understanding of them also. To our way of thinking, an even more weighty argument against such a theoretical classification is that we are not basing this classification upon the inherent nature of the phenomena but making it dependent on the lack of knowledge of the person making the classification. For instance, a person with a marked constitutional sensitivity may have been subjected to an unfortunate constellation of circumstances which may have convinced him that certain people had taken an inimical attitude toward him. If, in addition to that, he suffers a series of failures in things he is attempting to accomplish, he may develop a delusion of persecution, believing that this group of inimical persons is responsible for his failures. In such a case we can follow a logical chain of events, which renders it understandable to us. Contrasted with this we find a series of delusions of persecution appearing in a person who hitherto seems to have been of an average type but who has been exposed to some agent which causes a disease of the brain, such as syphilis or alcohol. Here superficially we would be at a loss to gain understanding of these delusions, but having observed occurrences of this type in a number of patients, we would establish empirically a relationship between

the effects of alcohol and syphilis upon the brain tissues and the subsequent occurrences of delusions of persecution. The delusions themselves may be very similar in nature in both of these cases, and yet in the one case we will speak of understandable and in the other case of explanatory relationships.

Other methods of the systematic presentation of these concepts are, for instance, found in the attempts to force all or most of the observable phenomena into a groove furnished by some special theory. To these would belong the extreme proponents of certain theories advanced to explain the nature of psychopathological phenomena as a whole. Some argue that all of these phenomena develop on the basis of definite constitutional or hereditary peculiarities of certain persons. Others claim that these same phenomena are due to certain types of peculiar experiences to which the persons have been subjected. These latter would even go so far as to state that any individual will develop certain types of reactions if he happens to be subjected to a set of injurious experiences at a certain stage in his life. Discounting the *a priori*, quite evidently faulty logic in such argumentation, our actual experiences with the study of cases of this type would fail to substantiate these extreme theories. No set of psychopathological phenomena could ever be found that can be explained solely on the basis of any one particular theory.

The question then would be, can we find certain categories that, from the very nature of psychopathological phenomena, could be regarded as essentially and apodictically fundamental to all possible causes and manners of development known and unknown to us at the present time? It is clear that such categories, if at all available, would have to be very general in their nature, although in order to serve as a sound groundwork for a systematic presentation they would have to be not too general, for otherwise they would become devoid of all significance. Such categories, if at all possible, will again have to be found along the lines of their significance in adjustment as such. Furthermore, since we have begun with the idea that the adjustment or, as some would call it, the faulty adjustment of the mentally diseased person is in its essentials based on the

same principles as normal adjustment, but takes the twist because of certain types of circumstances, then we might approach the causation and manner of development of psychopathological adjustment along the same lines as we would study them in the normal. Our line of reasoning here would be somewhat as follows: Given a certain set of categories which may be regarded as including all the possibilities of the causes and development of normal adjustment, we could use these categories in classifying the same concepts in abnormal adjustment, only we would try to find what changes have taken place in different components belonging to these categories that have led to a new form of adjustment. As we analyze adjustment as such, not only in human beings but in living organisms in general in the light of all-inclusive fundamental issues in this process, we can find certain general categories to which all phenomena of adjustment are reducible. These categories present themselves in the following fashion:

Out of a long line of ancestors through a process of evolution, an organism is brought into the world with a given set of potentialities which it has obtained through the development of the whole race as well as its own prenatal development. With these characteristics, which might be called *constitutional*, it comes into an *environment* which in itself has reached the stage at which this organism finds it through a series of occurrences in its own history. If time were to stop exactly at the birth of this organism and the adjustment of the individual were a matter of only one moment of contact with this environment, then we would be justified in saying that all reactions of such an organism would be reducible to two possible sets of causes and mechanisms; that is, the constitutional characteristics of the individual and those of the environment as the organism found it. But time does not stop, the organism continues to live, and as it goes on it continues to adjust itself to the situations it finds, and as it does so, each one of the experiences it has leaves an imprint upon it just as the organism leaves an imprint upon the environment to which it has adjusted itself. This then brings a third fundamental issue into the picture, that is, the additional *acquired* characteristics in

the form of such imprints engrafted upon the constitutional characteristics on the one hand and the historical characteristics of its environment on the other.

Logically one can see no other conceivable categories to which the mechanisms of adjustment can be reduced, and we could say, therefore, that the adjustment of an organism at any given stage during its life will be conditioned (1) by the *constitutional* characteristics of that organism, (2) by the characteristics of the *environment* to which it has to adjust itself, including not only the environment as it is at that time but the environment as it has come to be through the ages, and (3) to those imprints left upon the organism by the series of structuralized *experiences* from the birth of this organism until the time when we observe its adjustment. But these three categories that may be considered as all-inclusive for adjustment in general can just as logically be accepted as categories for abnormal adjustment. We will admit that these three categories in being general and all-inclusive are also so broad that they tell us very little in our attempt to understand the causes and manner of development of any given psychopathological phenomenon. They can, however, serve for the purposes of systematization.

In such an attempt at systematic presentation we could proceed as follows: Taking it for granted that all known as well as unknown possibilities in the line of abnormal adjustment must be reducible to any one or all of these three categories, we could classify all our knowledge concerning the causes and manner of development of psychopathological phenomena under these three headings, and then proceed to search for the unknown, with these categories as lines of approach. In dealing with a delusion, for instance, we would say the causes and manner of development of this delusion must be looked for (1) in the field of constitutional characteristics, (2) in the field of the experiences of this individual up until the time the delusion presented itself to an outside observer, and (3) in the field of environmental causes as we know them at the time when the delusion became apparent. Supposing then that we have one of these. Let us say that in a certain number of in-

dividuals we found that the delusion has developed in relation to the effects of alcohol (an environmental factor) upon the brain. We do not as yet understand why and how this particular set of delusions should develop in such a person. In our search for supplementary factors we will then proceed in the following way: We will search for certain common characteristics in the constitutional makeup of these individuals. We will also search for other common characteristics in the life and experiences of these individuals up to the time when the delusion developed. And we will, furthermore, continue to search for environmental factors other than the alcohol that may give us further insight into the reason why and how this delusion has developed.

In our attempt to understand these relationships we will at this time undertake a discussion of those factors in the causation and manner of development of psychopathological phenomena that have become empirically or experimentally known to us and classify them under the headings of these three categories: (1) constitution, or phylogenetic determinants, (2) development, or ontogenetic determinants, (3) factors within the situation itself, which will deal mainly with those relationships that are established by the organism seen in the light of its phylogenetic and ontogenetic development, in the process of its adjustment to a given environment.

Throughout the ages the development of the knowledge of these concepts has proceeded not in the form of a straight and even line but of steps conditioned by the inspiration of certain individuals who have gained profound insight into the effects of any one or all of these factors. Genius is usually one-sided, and as we look through the development of this phase of psychopathology we find that now and then some investigator would gain an understanding of the effect of some special factor or set of factors in the causation of some psychopathological phenomena and would advance along this line, paying little attention to the possibility of relating it to the other fundamental factors. Theories, therefore, that have been advanced along the line of etiology and that have been instrumental in giving us insight into the understanding of these phenomena

have usually developed along some special line, and before they can be utilized, we must be able to see what relationship they bear to other theories, and how much of what has been advanced can be accepted as objectively true.

In psychopathology this can be done in either one, or preferably both, of two ways: the *empirical*, which is concerned with the practical applicability of these theoretical conclusions, or the *experimental* investigation into the objective validity of these theories. The clinician on the one hand, and the experimental psychopathologist on the other, provide such means of checking up on theories that have been advanced along these lines. In our discussion in this part we will attempt to present this systematic investigation of the causes and mechanisms of psychopathological phenomena in the light of the better known and accepted theories in this field. As our purpose consists mainly in the discussion of the applicability of these theories we will not undertake any exhaustive presentation of any one of them with a subsequent defense or refutation of any of its parts. Our plan is to present those aspects of the theories which, either empirically or experimentally, have been proven tenable. In some theories it will be necessary to present certain of their aspects which, although not yet actually proved to be true, are logically conceivable, and are essential to their comprehensive presentation. These unproven aspects will be mentioned as such. We must emphasize further that the number of theories along these lines is so great and the literature that has accumulated in the investigation of these theories so extensive, that we can scarcely expect a complete presentation of even the tenable aspects of all the theories. We will restrict ourselves, therefore, to choosing what to us appears the most important aspects of the most important theories.

Constitution, Heredity

The terms constitution and heredity are not only broad and comprehensive in their conception but have also, throughout history, been subjected to so many variations in their uses and application that it is important, first of all, to state what we

mean by these terms before we discuss the different factors that we consider as belonging in this field. Theoretically, the term *heredity* should be applied only to such features or characteristics as are transmitted through the germ plasm. The development of the individual apart from the development of its ancestors begins at the fertilization of the ovum, and by hereditarily transmitted factors we should really understand only those features that have been present in the two cells that took part in the beginning of the development of the individual. It is a well-known fact, however, that during the prenatal development the embryo leads an individual existence and has to adjust itself to the conditions around it. In addition to this it may be subjected to certain unusual factors such as disease, trauma, etc., all of which will tend to give rise to new characteristics. The child will thus bring with it at birth not only purely hereditary traits, but also some that it has acquired during its prenatal life. Theoretically we should really differentiate the latter from the purely hereditary traits, and it is possible that some time in the future with the perfection of methods of investigation we will be able to do so. At the present stage of our knowledge, however, this is at best very difficult and in most cases is impossible. Not only that, but we may meet with difficulties in differentiating even some of the characteristics which were acquired in early infancy from those that are purely hereditary. When we speak of constitutional characteristics in psychopathology, therefore, we refer not only to hereditarily transmitted features, but quite frequently also to a great many that have been acquired in prenatal and early postnatal life.

Our attempts to determine these characteristics depend essentially upon two methods of approach. First, we investigate the characteristics found in the immediate and remote ancestors of the individual, and if a factor is found to occur repeatedly in a large number of the members of the same family, we deduce, often, perhaps, without any justification, that these features are of a constitutional type. Secondly, we investigate the early life of the individual and try to determine those traits which have been observed as occurring consistently in the individual as far back in his early life as possible, and when

such factors are found we consider them, too, as constitutional.

The possibilities for error in such an approach should be appreciated. First, as we have mentioned above, it is quite possible that a number of these characteristics were acquired in early postnatal life or in the prenatal existence of the individual. We then run the danger of considering as constitutional those factors which are really acquired by the individual, and, therefore, are ontogenetic and not phylogenetic. Secondly, there are certain constitutional features which may not show themselves early in life and come to light only at a certain stage of the life of the individual when such characteristics will be called into activity. This applies, for instance, to the inheritance of certain sexual abnormalities. Most frequently these do not show themselves until the person begins to adjust himself to the serious problems of sex life, that is to say, at puberty or later. This can also be observed in the case of such traits as early involution and senility, which will, of course, not show themselves until a certain stage in life, even though they are characteristics that may be carried by the germ plasm. It is important, therefore, to base our determinations as to the constitutional character of certain features on both of the above methods, that is to say, the investigation of characteristics frequently occurring in the ancestors of the individual, as well as their consistent appearance early in life or at certain critical stages of development.

Constitutional traits may be *general* in nature, that is to say, they may condition certain general potentialities in the behavior and experience of the individual as a whole, or they may be associated with *special* features of some aspect of the mental activities. In the first case we speak of constitutional types, and in the second case we speak of special constitutional factors.

Constitutional Types

Very early in the history of the investigation of human nature it has been noticed by various observers that no matter how much individual variation there may be among human beings, they also show some general traits, which are characteristic

of whole groups rather than single persons. In other words, an individual in addition to having certain features peculiar to himself, also has some which he shares with a number of similarly endowed persons and whereby he differs from those that do not belong to the group. It was also noticed that these common traits were more consistent than the individual ones and came to be regarded as inborn and unchangeable. On this basis human beings came to be classified into types. In the earlier attempts at such classifications, the main interest was centered on the mental rather than the physical makeup of the person. As time progressed, however, and systematic investigations replaced mere observations, attention was turned towards the study of physical traits as well as the mental and at the same time efforts were made to establish experimentally or statistically the validity of regarding these traits as constitutional rather than conditioned by certain environmental settings. The early theories along these lines need not concern us so much here because they were mainly based upon empirical observation without any particular regard to the possibilities of experimental proof.

One of the first to lend itself to general application was that of classifying human beings into the so-called *temperaments*. Four of these were recognized, viz.: the *sanguinic*, *melancholic*, *choleric*, and *phlegmatic*. They were regarded as inherent constitutional character traits which, even though subject to influence by experiences and circumstances during the course of the life of the particular individual, nevertheless represented very strong potentialities which remained consistent throughout his life. It was also observed that certain physical characteristics usually occurred in association with these types of temperament. Since then a large number of studies have been made, and new concepts advanced, some of them dealing mainly with mental types, others with the differences in physical makeup. In the following we will attempt to present in brief the more recent views on this subject, and we will start with the discussion of mental types as constitutional determinants of mental activity. This can probably be best accomplished by a discussion of Jung's contribution to the problem.⁵²

Mental Types

In his introduction to the study of psychopathological types Jung starts with an analysis of the attempts made along these lines by students of psychology preceding him. Of the more important and the more recent he mentions, for instance, Jordan and his attempts to classify human beings into the passive and active, James with his opposites of empiricists and rationalists, Gross and his work along the lines of psychopathic inferior types, and others. With these as the background he offers as his own contribution what can be considered the most systematic attempt of classifying human beings into mental types. In this he starts out with a fundamental concept, *libido*, which he defines as the "total psychic energy" of the individual. On the basis of the direction of the flow of this libido, that is, whether it flows predominantly outward or inward, he classifies human beings into two general groups, *extraverts* and *introverts*.

The *extravert* is mainly interested in the outside, the direction of the flow of his libido is outward, and the object, as such, claims more interest than his subjective contents. He follows the current of events around him, his behavior being conditioned by these external occurrences. He is a "good mixer" and an easily adjustable person. His experiences and activities depend mainly on stimuli from the outside. With that, he is rather changeable and inconsistent; ideas originally his own or acquired from the outside will easily give place to new ones as they happen to flow in from the outside. He is also easily upset by things that occur around him, as if he were in resonance with them. He is the type of person who appreciates beauty, justice, good and other values, in a conventional manner, falling in with accepted standards and contributing little toward reshaping things outside himself.

Opposed to this is the *introvert*, a person who lives mainly within himself and whose flow of libido is directed inward. Things outside and changes in his environment are of only secondary importance, since his interests and occurrences within himself claim first place. He is the revolutionary rather than

the conventional type, but having once formed standards and values he abides by them even in opposition to his environment. His appreciation of values such as beauty, etc., is not so much of things accepted as beautiful but of things which to him symbolize his own ideas and feelings of beauty. These two types are general in nature, and they are constitutional; that is to say, individuals by virtue of their constitutional makeup will tend to be either the one or the other. This does not mean, however, that all human beings can be clearly divided into these two groups. Jung stresses the point that no person, however extreme he may be, is born with only the one tendency. There are in all of us tendencies toward both, but the one may predominate over the other. When that happens, there is a tendency for the predominant trait to repress the other, and as the person develops, all other factors being equal, if he had a tendency toward introversion, this will increase with a concomitant tendency toward repression of extraversion.

The understanding of the applicability of this theory to the study of human nature, and especially the appreciation of the reasons why in some cases we find a vastly greater leaning toward one or the other types than is usually true, will be materially helped by realizing the significance of development in shaping these original potentialities toward types. It was stated above that given a certain tendency for a particular type this will be progressive in nature so that the tendency will increase as the personality develops. This, however, takes place only where the environmental factors favor such a progressive increase in predominance or at least do not hinder this from developing. Where the environmental factors tend to condition the person against such a leaning, the reverse will take place; that is, the tendency towards a predominance of the particular type will decrease and with it there will be a proportional emergence of the opposite tendency. Thus we find that if a person, whose original tendencies were toward introversion, is conditioned by some very important occurrences to develop affections and interests in outside people, his tendency toward introversion is not only not increased, but he paradoxically develops in addition more pronounced extraverted

tendencies. This fact, as well as the observation that in most people the original predominance of the one or the other tendency is not very pronounced, produces in the average individual a state of comparative balance in which introversion or extraversion is only slightly predominant, and it is because of this that extreme types are found only rarely. To the psychopathologist these concepts are more important than to the student of normal psychology, because it is in the field of psychopathology that the extreme types, either by virtue of constitutional tendencies or because of certain developmental situations, manifest themselves.

In addition to this general classification of types Jung has also proposed a subdivision of these two general types into four subgroups depending upon what he calls the *fundamental functions* of human nature. These fundamental functions, according to him, are *sensation*, *feeling*, *thought*, and *intuition*. He considers sensation and intuition as *irrational*, thought and feeling as *rational* functions, and takes the stand that just as extravert and introvert are two opposites, so are the members of either of the two groups of functions. Feeling is the opposite of thought in the rational functions; sensation the opposite of intuition in the irrational ones. Whether one can accept this concept of fundamental functions and their nature *in toto* is problematic. It is also questionable whether they are the basic elements to which all human mental functions can be reduced, and whether there may not be others that are totally apart from these four. The reasons, furthermore, for designating the one pair as rational and the other as irrational may also be open to question. To proceed, however, with Jung's theory, we find that he is of the opinion that even though a person may be mainly extraverted or introverted, he may also overdevelop any one or two of the fundamental functions at the expense of their opposites. Thus a person may have an overdevelopment of feeling with a repression of thought or an overdevelopment of thought and intuition with a repression of feeling and sensation. In such cases we will speak, for instance, of an extraverted thinking person who represses introverted feelings, and so on. Here, too, the overdevelopment of the one and the

repression of the other function tends to be progressive in nature but is subject to influences conditioned by development.

Leaving aside the conclusions that Jung reaches concerning normal psychological manifestations of the different degrees of over and underdevelopment of these tendencies and functions, we come to the psychopathological applications of this theory. It is only in extreme types that psychopathological phenomena can develop on the basis of these processes. Where there is an overdevelopment of one tendency or function to a pronounced degree, there will be a proportionate underdevelopment or repression of the opposites. Sometimes this repression may reach the extent of forcing the repressed tendencies altogether out of the conscious life of the individual, in which case they cannot gain any gratification, and remain as dormant forces which may then appear under unusual circumstances, in the form of cravings, symbolic contents, or actually expressed psychopathological phenomena. Whether or not we agree with Jung concerning the actual significance of the interrelationships of the functions, we certainly find in practical work that extraversion and introversion do occur as predominating tendencies and, even allowing for the powerful influence of developmental occurrences in conditioning such predominance, we must admit that a large proportion of mentally diseased persons appears to be constitutionally endowed with potentialities in the one or the other direction. This fact is supported both by studies of the family history of individuals that show such tendencies and the investigation of the very earliest manifestations in the behavior and experiences of such individuals. Furthermore, we find that where these tendencies are pronounced they serve as, at least supplementary, causes of the development of psychopathological phenomena.

Within recent years a great deal of work has been done on statistical and experimental investigations of the problem of mental types. Most of these studies have been carried out along the lines of extraversion and introversion but other traits have also been investigated. The work along this line is too specialized and cannot be considered fully here. We refer the student to the publications of Allport, Bernreuter,

Kohlstedt, Thurstone and others.^{6, 7} In all of these we find that the existence of personality traits which are most probably constitutional in nature and characteristic of certain types or groups, can be shown both experimentally and statistically.

Physical Types

The rudiments of the development of theories concerning physical types go back at least as far as those concerning mental types. In the popular mind as well as in the writings and teachings of students of human nature we find a very early tendency to connect certain physical peculiarities with special character traits. Strong convictions that either the general physical habitus or the shape and features of the face are definitely related to certain character traits have existed for a long time, and their influence was so great that some persons have come to claim the ability to form judgments concerning an individual's character by studying his face or his general physical makeup. Within comparatively recent years these concepts have been subjected to more thorough scrutiny, and systematic investigations have been carried out to determine whether they are scientifically tenable. Numerous theories have been advanced, each of them usually along the particular interests of the investigator.⁹² Thus we find that Giovanni has classified human beings in relation to their medical, physical status, into three types: the *plethoric*, the *athletic*, and *phthisic*. Although the classification was undertaken mainly in relation to certain forms of physical makeup and tendencies toward certain organic diseases, the types were also considered from a point of view of mental traits. A more or less similar classification was advanced by Sigaud with certain physiological conditions as the basis. He described the *digestive* type, the *muscular* type, and the *respiratory* type. Analogous to this also is the theory of Hutter, which is based upon embryological considerations and recognizes three main types: the *nutritive*, *motor*, and *sensory*. Finally we have the theory of Lombroso, which concerned itself with the relationship of certain physical features to criminal tendencies.

The most consistent and systematic investigation of physical types was carried out by Kretschmer⁵⁸ in connection with his study of mental disease. He found that persons with mental disease tended to fall into four distinct physical types, with a definite relationship between the physical makeup and the type of mental disease developed. He gives a description of these four physical types as follows:

A. The pyknotic. These are short-limbed, compact persons of rotund, well-nourished physique and high color. The bones tend to be delicate, the musculature soft and the fatty tissues abundant. The head, chest and abdomen are large in circumference, with narrow shoulders and a short neck. The face is soft, broad and round; the skull vertex flat and the facial features are well formed. The nose is usually fleshy and the profile lacks in angularity. The hands are short, broad and of soft structure. The hair of the head tends to softness and thinness and there is usually early baldness, whereas the hair of the face and body is quite profuse.

B. The athletic. These are tall and long-limbed. Broad shoulders, narrow hips and slender lower limbs give the impression of tapering from above downwards. The bones are coarse, especially at the shoulder girdle and ends of the limbs. The muscles are hard and prominent, the skin is elastic and there is little fat tissue. The neck is usually long and well-muscled. The head is high with fairly prominent cheek bones and a strong broad chin. The shape of the face approaches that of the steep egg form.

C. The leptosome. These show a cylindrical trunk with a long, narrow thorax and narrow shoulders. The limbs and neck are long. The bones, muscles and skin are thin and delicate. The head is small and tends to be either high or round. The nose is usually long, and with the small, rather receding chin, one gets a marked angularity of the profile. The shape of the face approaches the short egg form. The skin is usually pale. The *asthenic* type is essentially similar to that of the leptosome, but is probably somewhat more extremely narrow in its measurements.

D. The dysplastic (hypoplastic). In this group we find a

number of different types characterized by deficiencies and abnormalities in the general structure. Such deviations as eunuchoid features (pronounced length of extremities, broad hips or other feminine traits in men as well as masculine characteristics in women, etc.), hypoplastic features, dwarfism, disproportions between different parts of the body, may all be considered as belonging to this type.

In addition to these so-called pure types, he finds what he calls *mixed* types. Of these, the most common is the athletic-asthenic combination, where, with broad shoulders and strong musculature, we find the skeletal features of the asthenic type. Another combination which occurs quite frequently is the pyknotic-athletic. The leptosome-asthenic is hardly a true combination as the two types are so closely related that they cannot be considered as opposing types of physical makeup.

As we mentioned above, Kretschmer's work was started in relationship to certain types of mental disease. In enlarging the scope of his investigation he found pure representatives of these types in other fields. He made a study of the personalities of outstanding artists, political leaders, and so on, and found that persons with these different special interests also tend to be of definite physical types. In his attempts to apply this form of classification to normal persons, and in similar attempts of those who have followed up his studies, we find conflicting conclusions. Most observers in this field feel that in physical as well as mental types we rarely find definite representations of the pure types in the normal population. We find rather those who tend to one or the other direction with an admixture of features characteristic of other types.

The relationship of physical characteristics to character traits is even more complicated. In the original publications on this subject, Kretschmer was of the opinion that the pyknotics showed a marked tendency toward affect (mood) disorders, and that athletics, asthenics, leptosomes, and dysplastics generally showed a tendency toward schizophrenia. It was suggested, furthermore, that the asthenics tended to develop certain types of neuroses, while epileptics showed a tendency

to be of the athletic type. There has not been enough corroboration presented, however, to warrant a definite correlation between physical types and those mental diseases, although a pronounced tendency toward mood disorders in the case of pyknotics is granted by most observers. With all this, Kretschmer has come to the conclusion, nevertheless, that certain general character traits are associated with his physical types. He has classified character traits into two broad groups: the *cyclothymic* and the *schizoid* (in relation to their association with the mood disturbances and schizophrenias). The cyclothymic traits are most frequently found among pyknotic individuals while the schizoid are characteristic of the leptosome and athletic. These two mental types correspond broadly to the types described by Jung, the cyclothymic being closely related to the extravert, the schizoid to the introvert, but they have in addition some aspects of the two mental diseases mentioned above. Various other attempts to group character traits by this psychiatric method of approach have been undertaken,¹² the most useful terms introduced being probably the *syntonic* and the *dystonic*, opposites, respectively similar, again, to the two above-mentioned types.

In summarizing the above statements concerning types, both physical and mental, and the practically applicable insight that we can get from these theories in the understanding of the causation and manner of development of psychopathological phenomena, we can say the following: Investigations of the family background and personal makeup of individuals manifesting psychopathological phenomena have shown that at least a large proportion of these is constitutionally endowed with certain mental and physical characteristics which tend to progress through life and, although influenced by developmental occurrences, help in molding the phenomena as we observe them. As the basis for such types we might accept the extravert-introvert grouping of Jung, modified by the syntonic-dystonic additional features, and the physical characteristics as described by Kretschmer. The role played by these constitutional tendencies in the causation and development

of mental diseases is a very important one, although under no circumstances and in no individual can they be considered as the sole causative factors.

The specific relationship can only be seen in certain phenomena and in certain types of individuals. Thus, given a person who has consistently shown the mental makeup described under the extraverted type, who is definitely of the pyknotic physical makeup, and who, in his family, shows a preponderance of similar types, we may with a fair degree of probability predict that he will show certain character traits, especially those described in the first chapter of *Phenomenology of Behavior* under the heading *Changes of Direction Outward*. Similarly, an introverted, leptosome person will show the opposite tendencies of deviations in direction *inward*. These may be in the nature of features which, even if not found in the average individual to that extent, may still fit into the limits of normal. But they may also be more pronounced and border on the distinctly abnormal. Furthermore, if, by the interaction with acquired and environmental causative factors, these features should become more accentuated, the disturbances in behavior or experience will also increase in severity. Thus the extraverted, pyknotic person may go on to the development of markedly increased or decreased general activities which, however, will still retain their relationship to and dependence on outside occurrences. He may then show along with the increased activity an equally exaggerated receptivity and accelerated but shallow manner of association, deviations in attitude either towards the extreme of acceptance or dissatisfaction with occurrences in a situation, i.e., elation or depression. In fact, he will manifest all of the phenomena that have been described as occurring in close relationship to factors in the situation as a whole, but especially in his environment. Similarly, the introverted, leptosome individual, if he goes on to the development of psychopathological phenomena, will show a pronounced reduction in interests in the outside. Whether there is an increase or decrease of activity and receptivity it will be dependent mainly upon occurrences within himself rather than in the outside. He will be prone to develop autistic thought,

bizarre associations, sensitiveness and suspiciousness, and disturbances in evaluation that are associated with the loss of subject-object differentiation.

Once more we must emphasize that no matter how pronounced these constitutional tendencies may be, and no matter how clearly manifest they may become, they would not in themselves necessarily lead to the development of these serious psychopathological disturbances. Even though present in an exaggerated fashion and leading to certain deviations from normal behavior, they may remain through life only as characteristic abnormalities in the makeup of the individual which every now and then may bring him into clash with the situation, but do not develop into definite mental diseases. This type of disturbance, which is mainly dependent upon general constitutional makeup, is spoken of as one type of *constitutional psychopathy*.

Special Constitutional Characteristics

In addition to the constitutional features described under the concept of types as being of a general character, there are certain psychopathological phenomena of a more special type that may be considered as dependent upon the existence of certain constitutional potentialities. These may be in the nature of disturbances in certain groups of mental activities or in rather specialized forms of these. We are all familiar with instances of this type in the physical makeup of the individual. Such things as tall or short stature, tendencies to obesity or sparseness, to certain pigment of the hair or skin, early greying of the hair or baldness, visual or acoustic disturbances, and a number of others, are some of the features which are known to be dependent upon tendencies that are constitutionally brought into the world by the individual. In psychopathology we find analogous examples. In addition to the general character disturbances that we have discussed under types, we may have such faults in makeup that are constitutional in nature but are rather special in their manifestation, although they can also be regarded as psychopathies. Sexual anomalies may be expres-

sions of such inherited traits, although we must remember that possibly a considerable number of the sexual perversions and anomalies that are regarded as constitutional psychopathies may really be due to certain experiences in the life of the individual, that is to say, may really be of an acquired nature. Nevertheless a certain number of these appear to be caused by constitutional factors. Cases, for instance, of actually exaggerated or diminished sexual drive, homosexuality, and various others may be considered as dependent to a large extent upon an original constitutional fault in makeup. Another group of hereditarily, or at least congenitally conditioned psychopathological phenomena is represented by a large number of the mental defects. There we find that both the study of the family and the very earliest days of the postnatal development of the individual have shown forms of adjustment that are indicative of a lack of development of the intelligence of the person.

In other cases we find constitutional tendencies towards the development of certain disease syndromes.⁸⁴ In addition to the pronounced tendency of an extraverted, pyknotic individual to an exaggerated type of reaction that may go on to the development of a manic depressive psychosis, we may find that not only these tendencies toward marked extraversion but the actual occurrences of the disease-process "manic depressive" psychosis may occur frequently in the families of patients suffering from that disease. The same is true of the disease known as epilepsy and also, although to a lesser extent, with other diseases such as schizophrenia, and so on. A special type of constitutional tendency in psychopathological phenomena is that designated as the *neurotic*. Here we find that certain individuals seem to have constitutional potentialities toward the development of certain phenomena that in clinical psychiatry are grouped under the concept of the neuroses or psychoneuroses. They manifest themselves especially in those forms of pathological experiences that have been described under the heading of Disturbances in Evaluation with Preservation of Subject-Object Differentiation and some of those that have been designated as transitional.

To conclude, then, we can say that in the causation and de-

velopment of psychopathological phenomena constitutional characteristics either of a general or of a special type play a very important role. This role only rarely takes the form of a predominant causative factor and should never be considered as the only one. Most frequently they appear to act as constitutional potentialities that prepare the individual for psychopathological types of adjustment, and become manifest only when other factors in the form of environmental and ontogenetic determinants come into play, and it is through the interaction of all three of these that the full-blown psychopathological phenomenon comes into existence.

Chapter XX

ONTOGENETIC DETERMINANTS

BY ONTOGENETIC determinants in the causation and development of psychopathological phenomena we understand those factors that have come into play following the birth of the individual until that stage in his life when the psychopathological phenomenon has become apparent to the outside. They may be spoken of as either predominantly physical or psychic in their nature. By this we mean that although biologically we must regard any occurrence that leaves an imprint upon the individual in the process of his development as being both physical and psychic, nevertheless in some cases the physical characteristics of this factor may be predominant, whereas in others it is the psychic aspect of it that comes to the surface. Thus we find, for instance, that an injury to the head sustained in early life may, by interfering with the proper structure and function of the brain, influence all of the subsequent activities in the mental life of that individual and in that way become an ontogenetic determinant of psychopathological behavior or experience. This we would consider as a predominantly *physical* ontogenetic determinant. Even then it may be only partially responsible for the psychopathological phenomenon. If, for instance, an injury of this type gives rise to permanent blindness, it will set up a series of experiences in the life of the individual that have to do with the rather special type of adjustment necessary in the case of blindness, such as feelings of inferiority on that basis, necessities for compensation, etc., and these give rise to a series of psychic determinants which are secondary in nature to what is primarily a physical injury. Contrasted with both of these possibilities we may have predominantly *psychic* determinants. Thus, for instance, a profound emotional

disturbance or experience taking place in early life may condition the individual in such a way that he will have a certain definite attitude toward settings of the type in which this emotional experience took place. Whatever the physiologically associated processes are in such an occurrence, we see predominantly the psychic value and aspects of it. In our discussion we will concern ourselves primarily with this latter type of ontogenetic disturbance. Secondly we will consider, although not to the same extent, that group of physical determinants in which psychic superimpositions take place, whereas the purely physical causes will be taken up later in the discussion of organic determinants.

The investigation into the importance of ontogenetic psychic determinants, although it has gained the important position that it has today in psychopathology only within comparatively recent times, has not been altogether neglected before. We find reference to these concepts in the ancient Greek literature, as well as in those studies of human nature which with other fields of scientific endeavor gained such pronounced impetus during and following the period of the Renaissance. A most profoundly conceived and clearly stated forerunner of the modern appreciation of these factors is found in the ethics of Spinoza⁹⁹ in his analysis of the nature and origin of the emotions. This is expressed particularly well in Prop. XIV of Part 3, where he states that "If the mind has once been affected by two emotions at the same time, it will, whenever it is afterward affected by one of the two be also affected by the other." Concise as this is it contains some of the fundamental principles of both the psychoanalytic and conditioned reflex theories. Other less clearly stated thoughts could be found in the history of philosophy and the earlier work in psychology.

However, the first systematic attempt actually to apply these principles in practical psychopathology was made by the French group of psychopathologists who started the investigation of these determinants in the neuroses about the second half of the nineteenth century. Leaving aside for the moment the most important contributions of this school, i.e., the understanding of the structure of the personality, and judging them

mainly by what they added to the knowledge of the influence of ontogenetic determinants, we must emphasize especially two concepts. The first was that introduced by Charcot on the basis of his investigations of traumatic hysteria. He found that in some of these cases it was not the physical accident alone that caused the illness but that the "memories" of the accident also played an important part, i.e., that "ideas" related to previous experiences could cause symptoms of abnormal mental activity. The second was contributed by Janet in his attempts to gain further insight into the psychology of the neuroses.^{49, 50, 51} As is well known, he regarded the chief symptoms in hysteria, psychasthenia and allied psychopathological conditions as manifestations of "dissociation" (this concept will be taken up again in the discussion of personality structure). He then advanced the concept that dissociation was dependent upon certain fluctuations in the so-called "psychological tension," which could be conditioned by affectively laden "Idées fixes." In other words, he came to appreciate that certain emotionally significant experiences in the life of the person may become the conditioning factors of a lowering of the "psychological tension" and thus cause the development of psychopathological phenomena. Another and more important step in the progress along this line was the introduction of the psychoanalytic theory by Freud. As this theory has within recent years come to exert a profound influence upon psychopathological investigation and, furthermore, can be regarded as a prototype of a systematic approach to this problem, it is important to discuss it in greater detail.

The Psychoanalytic Theory

Psychoanalysis developed primarily as a method of treatment of certain types of mental disease grouped under the collective name of the *neuroses*, and it was only subsequently that the theory of psychoanalysis has developed for the purpose of elucidating some of the principles involved in the method. From the practical point of view of the clinical psychiatrist, it is the method that is of primary importance, and the theory

is only secondary. In psychopathology, however, where we are not interested so much in the treatment of mental diseases as in the understanding of the nature and mechanisms of the phenomena met there, it is the theory rather than the method that claims our attention.

Before proceeding to outline this theory we must explain the reasons for the necessary restrictions in its presentation. The psychoanalytic theory within recent years has spread to include not only the understanding of various psychopathological phenomena but also other phases of mental activity, including psychology in general, as well as its applications in the study of art, religion, social relationships, and so on. Interesting as these branches may be, we will have to restrict ourselves here to those phases of psychoanalysis that are essential in the understanding of purely psychopathological phenomena. Even in this field so much work has been done by Freud and his followers on the one side and those who undertook critical investigation of the validity of this theory on the other, that the aggregate of even the essential concepts and ramifications of the theory has become so great that it is hardly possible to present all of them in the limited space at our disposal. We will, therefore, have to restrict ourselves to a brief presentation of only the most essential features. Here, of course, we will encounter some difficulties and it is well that the reader appreciate them beforehand. Psychoanalysis, even when treated most exhaustively, is a complicated and intricate subject to understand. If its presentation has to be restricted the ease with which the material can be grasped is proportionately decreased, as restriction in space makes it necessary to simplify matters, sometimes at the expense of adequacy. In such a presentation there is no place for argumentation as to the validity or refutability of certain concepts, and sometimes in the attempt to be concise one may have to appear somewhat dogmatic. It is well for the reader to appreciate all these facts and if a thorough knowledge of the psychoanalytic theory is desired he should resort to the numerous books available on this subject.^{1, 23, 24, 27}

The central feature of the psychoanalytic theory consists

in the stand it takes in regard to the nature of mental activity in general. It looks upon the whole situation as a *dynamic* system and in the concept of dynamics it includes primarily the following characteristics:

1) The activities of the person are determined by certain forces within him designated as *triebe* (instinctive urges), and the nature of these activities is determined by the relationships of these urges to one another and to the forces in the environment in which the individual lives. As forms of energy, the *triebe* are directed toward certain objectives, and in striving to attain them they may come into clash with one another or may run counter to the direction of the forces within the environment. Under certain conditions, therefore, some of these instinctive urges may have to be kept from reaching their objectives; in other words, they may be *repressed*.

2) The function of these instinctive urges, just as that of any other expression of energy, necessarily takes place in the flux of time and is therefore subject to change. This change may express itself in the form of a shifting of the line of direction either because of certain interferences or because of biological transformations in the individual as a whole. With such changes in direction the very objectives of these urges may change and this can be regarded as the process of *maturation*. When such a shifting in direction takes place, especially when it is made necessary by biological transformation of the individual, the objectives in themselves, even if adequate at one time, may become inadequate at a later stage.

3) The structure of the personality in which these forces are at work is not a simple one but consists of levels. The manifestations of these instinctive urges as well as the different changes that they undergo and the different objectives toward which they press, do not necessarily appear on the surface, but may be relegated to deeper levels of the personality. Thus it is that a given form of activity may at first appear to be completely conditioned by a certain urge or objective, whereas actually other determining factors may be present under the surface acting in an unobservable manner.*

* The psychoanalytic theory of personality structure, i.e., the concepts of

From a psychopathological point of view, the most important single feature of this concept consists in the phenomenon of *repression* and the subsequent reactions to it. As was stated above, some of these urges may be prevented from reaching their objectives by opposing forces. They will thus be repressed, but, since it is in the nature of repressed energy to exert a counterpressure against the repressing force until an outlet can be secured, these repressed urges, too, if not allowed to run their original course, will tend to gain an outlet in some other form. The psychoanalytic theory regards psychopathological phenomena as expressions of the reappearance in some way of such repressed contents. To understand the meanings of these expressions as well as their causes and manners of development, we must appreciate first of all what these forces are, how they may clash with one another, and how they subsequently can gain outlet in the form of a substitute phenomenon. Since both the function and objectives of these forces are subject to change during the process of the development of the individual, we must, in order to appreciate them, approach them on a developmental basis. We will, therefore, have to start with the earliest forms in which these instinctive urges are manifested and see how they develop during the life of the individual. This investigation becomes more difficult and more hypothetical as we recede from the more intelligible and accessible activities of the grown-up person to the less accessible manifestations of the earlier stages of development.

As was stated above in the discussion of the constitutional characteristics of the individual, the ontogenetic factors, theoretically, must be considered as beginning with the very earliest stages of the development of the embryo. It is there that we have to seek for the first manifestations of these instinctive urges of the individual as such. Theoretically, too, we can conceive these urges in the prenatal life as consisting of two primary forms: (1) that of *self-preservation*, and (2) that of *growth*.* In the embryonic stage the individual lives in a well-

conscious, preconscious, and unconscious will not be discussed in this chapter, but will be considered in the chapter on personality structures.

* The concept of *growth* is used here as synonymous with what in psychoanalytic literature is referred to as prenatal and early infantile sexuality. We are

protected type of environment where its need to procure food or to ward off dangers is, to say the least, at its minimum. Its food is obtained directly through the blood stream, the evacuation of unnecessary or injurious material is performed in the same fashion, and the activities in general between the embryo and its outside are restricted to the functions of maintaining its individuality as such and at the same time increasing its size and complexity. With the environment as beneficial and easy to deal with as can be desired, and with the material necessary for growth obtainable through its own blood stream by contact with that of the mother, there is very little interest necessary for the outside and all of the individual's interests are turned on to itself. Psychoanalytically, therefore, one speaks of the person's interests at that stage as being mainly *narcissistic*, that is, turned upon the individual itself. Since at this stage the instinct of growth is as yet only restricted to the multiplication of the cells themselves, and not at all related to reaching out for objective gratification which in later life will become the function of the sexual instinct, both the instinct of self-preservation and that of growth are primarily interested in one and the same thing, that is to say, the ingestion of food and rejection of injurious material. Thus it is that originally the instinct of self-preservation and that of growth (which is the forerunner of the sexual instinct) have the same objectives even though they are not of the same nature.

This condition becomes radically changed at the birth of the individual. The first and most important factor that enters now is that the ingestion of food, instead of continuing by way of the blood stream, begins to take place by means of specialized parts of the body: the mouth in the actual ingestion and nursing, the hands in grasping objects and bringing them to the mouth, and so on. At the same time the evacuation of food also begins to be relegated to special parts of the body such as the urethra, anus, skin, and so on. Here, then, we find that instead of the organism gratifying the needs of the self-preservation and growth instincts in a general way and therefore having its

aware of the complications that may thus be introduced but feel that the advantages derived justify its use.

desires for gratification spread over the whole of the body, this begins to be limited to certain zones. The original state of narcissism thus comes to be broken up into specialized interests in certain parts of the body. This is the starting point of that series of stages through which the individual has to pass before he reaches maturity.

Other factors come into play here as the individual gradually develops through infancy. The first one is that of the painful realization that the environment has ceased to be a purely protective and benevolent one and has become a more difficult one with which to deal. The infant finds that instead of being able to have food whenever he desires it, he is dependent on the wishes of someone in his environment. Evacuations cannot be indulged in whenever the stimulus comes, but, gradually and through a series of painful experiences, the individual learns that these evacuations must be performed at stated intervals and in definite places. The whole outside world with all the pleasant things it may contain is not directly at his disposal, but a number of things that are seen or otherwise perceived may be outside his reach. The child gradually begins to be aware of the fact that certain contents that would satisfy his original instinctive urges and therefore give him pleasurable sensations cannot be obtained, either because they are out of reach, or because they are actually forbidden by the environment. Two things, therefore, come to the attention of the growing individual, first that there is such a thing as an environment or a "thou" that has to be taken into consideration, and secondly, that in adjusting oneself to this environment one may frequently have to forego the gratification of one's instinctive urges.

In relation to the second of these two considerations, the psychoanalytic theory has brought in the idea of the differentiation between two concepts, the *pleasure* principle and the *reality* principle.^{22, 28} Instinctive urges seek for gratification and gratification affords them pleasure. They reach out for everything that gratifies them; in other words, they live according to the search of pleasure. On the other hand, the necessity of adjustment to an outside world brings into consideration

an opposing principle, that of the appreciation of what is permitted by the outside. This appreciation proceeds primarily along the lines of painful experiences if these demands are not taken into consideration, and so it is that the individual gradually learns to probe each urge for gratification of his instincts in its relation to the outside. In other words, when an urge for a pleasurable sensation presents itself, it introduces with it the possibility of its bringing the individual into clash with his environment. The individual, therefore, comes to act not only on the basis of obtaining pleasure but also on the basis of adjusting himself to outside reality, and each act before it is decided on has to be judged as to whether it will interfere with the reality principle. Thus, in addition to the conflicting tendencies which are established by the process of maturation, wherein new objectives have to be accepted to replace the old ones, there is the second group of conflicts established between activities motivated by the pleasure principle and those that have to be followed in consideration of the reality principle.

With this there occurs a split between the instinct of growth and that of self-preservation. Even before birth these two are essentially different and are united only by the fact that both find gratification in the same objectives. Self-preservation, by its very nature, makes the individual tend to remain as he is; in other words, it is not progressive. At each stage of the life of the individual, self-preservation as such has the tendency to keep the individual where and how he is at that time. The instinct of growth, on the other hand, is in its essence diametrically opposed to that. It makes for expansion, that is to say, for change, for spreading out into the world and including as much of it as possible. As long as the objectives are the same there is no opportunity for conflict. When a differentiation of objectives takes place, their essential differences become apparent, the self-preservation instinct tending to keep the person back, the instinct of growth tending to make him move ahead. When the appreciation of outside reality begins to develop, the self-preservation urges line themselves up around the concept of the *ego*. As the individual begins to realize the existence of an outside world that has to be reckoned with, the appreciation

of his own existence as an individual is necessarily conditioned by the recognition of other contents existing outside of him, and therefore the most important part of these urges group themselves along the periphery of the individual where he actually comes in contact with the outside. The central feature of these urges, that is to say, the appreciation of an individual as such and his efforts to maintain his individuality, is massed in that part which stands between the outside, as an environment, and the inside, as the instinctive urges of the person himself. It is because of this that the concept of the ego in psychoanalysis is to a certain degree synonymous with the concept of the *perception ego*, which is that part of the individual that perceives reality as well as the occurrences within itself and balances them against one another. The necessity of adjustment as such, that is to say, of taking into consideration the reality principle as well as the pleasure principle, becomes a function of this ego. It is here that the judgment concerning decisions to act takes place. It is here that the individual has to decide whether a certain urge arising within himself and seeking for gratification or pleasure will get into difficulties with the outside and, if it does, whether it should be repressed.

This function of judging and of reality-probing does not exhaust the concept of the ego because in addition to its function as judge, which remains on the periphery, it also retains the elements of the original self-preservation or narcissistic tendencies which are within the individual himself. Thus we find that the split between the ego and the growth instincts takes place along two lines and the opposition of forces may occur either in the one or in the other. First, in its capacity as judge of whether an instinct should or should not be gratified in face of existing situations in the environment, the ego may have to repress certain urges that arise within the instinct of growth. On the other hand, in its capacity as the expression of the self-preservation urges, the ego will tend to keep conditions as they are rather than to allow the progressive urges of the instinct of growth to be gratified. In addition to these two possibilities of conflict, the two components of the ego can also come into opposition when the instinctive urge to remain in status quo

comes into clash with what is demanded by the outside. In other words, the ego, as an instinctive urge from within, may be inhibited or repressed by the ego as a judge of what is demanded by the outside. This makes it necessary to consider the instinctive urges of the ego as similar to the instinct of growth from a point of view that both may have to be, and occasionally are, repressed by the ego as a judge. The sum total of the self-preservation tendencies of the ego and the instinctive urges of the instinct of growth are united into one concept under the term of *id*. Both of these functions are under the pleasure principle and are opposed to the perception ego as a representative of the reality principle.

The instinct of growth, as it functions in the prenatal period simply in the form of the tendency of the individual to grow, will, after birth, split into two components. The individual continues to grow and the cells to multiply, but in addition to that a new offshoot of the instinct of growth begins to develop, which has to do not only with the growth of the individual as such, but with the propagation of the species. This, the *sex* instinct, in its later development will have to reach out for heterosexual relations and the procurance of the mate for the gratification of these relations, and in that way there occurs a further accentuation of its split away from the self-preservation instincts. This splitting begins along the lines of concentration of these gratifications in special organs of the body, that is to say, in the genitalia. In this way the maturation process of the individual inasmuch as it is related to the sex instinct will have to undergo a further change in that the originally gratifying effects of the whole body that have later been concentrated on the oral, anal and urethral regions will be transposed into the genitalia. This splitting away of the sex instinct from the self-preservation instinct not only in its nature but also in its objectives tends to increase the opposing nature of these two tendencies, and in doing so accentuates the difference between maintaining the status quo of the individual and the spreading further into the world which is inherent in the sex instinct. As these concentrations of interests along the lines of gratification through the genital organs mature further and the individual begins to

reach out for objects of gratification by the search for a mate, this interest in individuals outside of oneself accentuates the opposing tendencies of the ego and the sex instinct.

But the process of maturation of the sex instinct is not a simple one. The first step, with the concentration of sex interests upon the genitalia rather than any other part of the body, causes a transference of the search for gratification from all the other organs of the body to the genitalia, and the first manifestation of this is an increased interest in these organs, manipulation of them for the search of gratification and the development of the phenomenon of *masturbation*. According to the psychoanalytic theory this stage is reached before the first three years of life, following which the normal individual begins to develop along the lines of the search of an outside object in the form of the opposite sex. The first objects of interest in this respect are those in the immediate environment of the individual and must necessarily be those which, by their nature, suggest the possibility of gratification along these lines. The parents, in their capacity as parents, represent the concept of heterosexual relations. To the boy, the mother becomes the prototype of the future mate, the father the prototype, first, of what he himself will be like when he grows up and begins to fulfill his function as a sexual being and, secondly, of that which he will have to overcome in order to obtain his present desire, that is, the mother. This forms the groundwork of that rather complicated phenomenon which in psychoanalysis is referred to as the *œdipus complex*. The boy, in appreciating the parents as they are, develops a desire for possession of the mother which afterwards is going to be transferred to the mate he will procure for himself. The mother, therefore, is loved by the boy and the boy has the urge for possession of the mother. The father represents to him two concepts, first that which he would like to resemble and what he hopes to be like when he grows up, and in this way he loves the father and identifies himself with him. But, opposed to this, the father is the possessor of the prototype of the mate, he is the obstacle in the way of procuring her, and therefore he is hated. Towards the father the boy develops the ambivalent attitude of love

(identification) and hatred (competition). According to the psychoanalytic theory this stage of the development of the sexual instinct is at its height from the third to the fifth years of life.

Following that and possibly on the basis of biological occurrences in the child, there is a period of time during which the development of the sexual instinct is at its minimum; it is known as the latency period and lasts until puberty. At puberty there is a return of the active development of the sexual instinct. The individual then is, in a comparatively short period of time, biologically and psychologically transformed from the child into the adolescent, when he begins to reach out for heterosexual activities. With the oncoming of puberty and the increased interest in sexual activities, the individual begins to be conscious of the need of gratification in relation to his genital organs, and before he actually begins to reach out definitely for the opposite sex he may, and usually does, go through a series of revivals of old methods of gratification of the sex instinct. These usually include masturbation and certain forms of homosexual tendencies (interests in the father).

The reason for the repetition of old methods of gratification can be found in two ways. First of all, the very fact that at one time during the life of the individual gratifications of an instinct have been obtained along certain lines will necessarily condition similar experimentation when this same instinct asserts itself with a new vigor.

In addition to this, the psychoanalytic theory advances the view that this repetition of old forms of activities is a resultant of the conflicting tendencies of the self-preservation and the sex instincts. As we said before, the sex instinct necessarily reaches out into the outside. It is in its nature progressive. The self-preservation instinct is conservative in nature. As a resultant of these two forces we have the compromise of gratifying both instincts by re-enacting previously experienced situations. This phenomenon is known in psychoanalytic nomenclature as the *repetition-compulsion phenomenon*. It is a manifestation which need not be limited to the stage of puberty. All through the life of the individual, even in normal persons, there

is a tendency to repeat earlier forms of activities even though they may not, at the later time, be completely gratifying. The rudiments of earlier methods of gratification stick tenaciously in the life of the individual so that even in well-adjusted normal persons certain manifestations, such as kissing and others, are really expressive of this tendency to go back instead of forward. Where the obstacles for normal gratification are very great or where this holding to old methods is very tenacious, we may find that these older methods may take the place of a normal adjustment. In this repetition-compulsion phenomenon Freud sees the expression of the original urges of self-preservation, and he comes to the conclusion that they apply not only to the sex instinct as such, but to human activities as a whole. All tendencies for progress and life are opposed by this tendency to go back to original methods and original states. He regards the so-called *death instinct* as the ultimate expression of this phenomenon, which is in itself expressive not only of a return to previous forms of life, but to the still more primitive inorganic state that has preceded the development of organic growth. Whether one wishes to follow Freud in this or not, the tendencies to hold to old methods, especially in the face of obstacles in the way of gratifying newer and more mature methods, is a fact which we find in normal as well as abnormal mental activities.

This brings us to the consideration of the concepts of *fixation* and *regression*, which are very important in psychopathology. We saw in the above discussion that the tendency to return to earlier situations and methods of gratification is a universal one and shows itself in rudiment in normal persons also. If, for some reason, any special point in the life of the individual is emotionally accentuated and the desire to return to it rendered stronger than to any other, we speak of it as a *fixation point*. The reasons for such accentuation may vary. If, in early life, a certain method of emotional gratification happened to be associated with an unusually stirring experience or was repeated on numerous occasions, we can see how the desire to return to it will be proportionately increased. If, in addition to this, the method of gratification employed at the time was an

adequate one (e.g., oral gratification in early life), and it was chosen in preference to utilizing a method which would be rendered adequate later on (e.g., heterosexual relations), we will have not only the pattern of returning to earlier methods but also of giving them preference to the more mature ones. Fixation points are probably present in normal people, but not being strong enough to overcome the tendency toward adequate methods in the normal adult they remain under the surface and, at most, may manifest themselves as certain auxiliary means of gratification. However, if the fixation point is unusually strong and if, in addition to this, the individual meets with obstacles in utilizing more mature methods, he may then give up his attempt to gain the latter and recede to the methods utilized at the fixation point. This phenomenon of going back to older methods is known in psychoanalysis as *regression* and is considered as being of fundamental importance in the development of psychopathological phenomena.

So far we have considered the functions of the self-preservation (ego) and growth (sex) instincts and have come to appreciate the possibility of two types of conflict: (1) That between the self-preservation tendencies, and those of growth (sex); (2) That between the id (pleasure principle) and ego (reality principle). Whether such conflicts end in the complete victory of the one side or a compromise between the two, a repression of energy results (total in the first case and partial in the second) and wherever there is repression there will be a concomitant search for an outlet.

In addition to these two components of the personality we must now consider the function of a third, which gradually develops in relation to the ego and has come to be known under the term of the *ideal ego*. As was stated before, the ego, functioning at the periphery of the individual, is the judge of his general activities, weighing the demands of the reality and pleasure principles and repressing the tendencies of the one when they come into open clash with the demands of the other. The ego does not actually represent either one of the two, but in its function as the perception apparatus it is as much related to the inner tendencies as it is to the forces of the outside world, maintaining

a more or less objective attitude to both. In its normal function the ego must, therefore, remain unbiased either by the one or the other. The inner world is represented to the ego by urges that come from within it, but what is it that represents to the ego the outside world and its demands? In general one might consider this as being represented by experience. The individual grows, gathers experiences during this growth, and comes to appreciate certain standards in the outside world that force it to act in a certain way. These experiences are gathered largely on the basis of the results of clashes with the outside world. As he grows the individual comes to appreciate that there is something outside himself that has to be reckoned with in his behavior; something in the nature of a "superior being" that makes certain sacrifices and accessions necessary but that tolerates certain other gratifications.

This concept is not developed in a diffuse way but in relation to special experiences in his life, in which certain persons outside himself force him to give up some of his tendencies, if he is to avoid getting into difficulties with the outside. Furthermore, these persons, especially in the earlier days of life, not only prevent him from obtaining gratification which is against their will, but also help him to obtain gratifications which he himself could not reach. The person begins to develop an ambivalent attitude toward these individuals, in which he respects and admires them for their help in securing some gratifications and fears them for the pressure they can bring to bear upon him in keeping him from others.

The first representatives of such persons are, of course, the people with whom the individual is closely associated in early life, that is, the parents. They are the ones who force him, for instance, to develop certain routines of obtaining food, evacuation of bladder and rectum, and other such functions. At the same time they protect him and obtain things for him which he could not obtain for himself. They inculcate in him a respect and fear of the outside world and at the same time help to develop an admiration for it. They are the first cornerstones of a structure which when fully developed will be the representative of all standards and ideals of the individual. As he grows

up and his needs and methods of gratification change, the persons who represent the outside also change. From the parents he proceeds, perhaps, to the older brother or sister, from them to the teacher, national hero, and so on. Thus a new component is built up, that of an *ego ideal*, the structure of which is quite complex. In the first place its development takes place in relation to different models which become fused into the one concept. Secondly, the person's attitude to it is ambivalent, consisting of admiration and fear, love and hatred. Thirdly, in the process of growth older ideals have to be discarded to make way for the new ones, and are, therefore, repressed in a fashion similar to the other instinctive urges. Finally, since they are so closely related to and associated with instinctive urges of the individual, especially in view of the fact that they serve as objects of gratification as well as of emulation and fear, they become part of the id just as do the urges of the self-preservation and sex instincts.

In the fully-developed individual, then, we will have a series of forces represented by (1) the *sex* instincts with their original source in the instinct of growth, (2) the *ego* with its prototype of self-preservation, and (3) the *ideal ego* as the representative of outside forces with their desirable and undesirable components. All of these may at times coöperate, at other times oppose each other, and the resultant activities of the individual will consist in compromises undertaken with a view of adjustment to all of these co-acting forces. At best, even in normal individuals, some of the tendencies for gratification can receive only partial fulfillment, some none at all. We speak of these ungratified urges as being repressed. The repressions proceed primarily from the ego and its superior, the ideal ego, but they may proceed from the other forces and relationships. What happens to these repressed contents? If we are to be consistent in our concept of the energy values of such contents, we will have to apply rules that hold true for energy in general; in other words, that repressed energy must find an outlet. Actually both in normal individuals and in psychopathological cases, we find various types of such outlets. As we stated above, the repressing forces are primarily furnished

by the ego in its appreciation of the demands of the outside world and ideal ego. The function of the ego is perception, that is to say, conscious, logical appreciation of values. In order, therefore, that a repressed content should be able to come to the surface again, it must in some way evade the repressing force of conscious logical appreciation. Normally this occurs in *dreams* and *mis-actions* (*Fehlhandlungen*). Psychopathologically it occurs in the formation of *symptoms*.

(1) *Dreams*.²⁸ The dream represents one of the phenomena by virtue of which ungratified desires that were repressed may gain an outlet. During sleep, when the function of the ego as a perception apparatus is at its minimum and the force of outside reality, as the conditioning factor of repression, is practically absent, the desires that have been repressed throughout waking life come to the surface in the form of wish-fulfillments. During his waking life immediately preceding the time when the dream occurs, the individual comes into contact with various stimuli, some of which may be related to the repressed material so closely that they tend to bring it to the surface. If the force of repression is very strong, and the repressed material cannot be brought to the surface, the new stimulus by virtue of its relation to the repressed content is repressed in its turn. It is not, however, subjected to the same force of repression as the original wishes. In the dream, with the removal of outside forces and the repressing tendencies of the ego, the new stimulus comes to the surface and with it brings the old wish, allowing it to be fulfilled.

That this actually occurs has been shown in a number of clinical studies as well as experimental studies on the relationship between recent impressions and dream psychology.^{68, 69} The recent impression that comes to the surface first is known in the psychoanalytic nomenclature as the *tagesrest* (day-residue), the old wish, as the original repressed content. Whatever happens during the dream as such, of course, is only available through the medium of communication after the person is awake, but when the person awakes the forces of the environment are again in function and there is the same objection to bringing up the repressed material, even though it

occurred only in the dream, as there is towards the fulfillment of the wish itself. This necessitates some form of rearrangement of the material in such a way that to the individual it does not appear as manifestations of the old wish. This process of disguising fulfilled wishes in the dream in such a way that they do not in and of themselves appear as objectionable contents, is known in psychoanalytic terminology as the *elaboration of the dream*, the process whereby this is performed as the *censure*, and the forms of disguises which are assumed by the dream contents as *symbolic expressions*. It is in this way that the phallus may be represented as a snake, the mother as a house, etc.

(2) *Mis-action (Fehlhandlung)*.²⁹ It is not only during sleep that the forces of the perception ego are rendered less effective; the same thing happens under other conditions. For instance, when a person concentrates on some special problem which occupies all of his attention, very little of the perception ego can be granted to other contents around him. The same thing may happen when the person is fatigued, exhausted, etc. Under such conditions we find that desires, which have previously been experienced but repressed, come to the surface in the form of accidental acts, slips of the tongue, lapses of memory, and numerous other such things. In this way repressed material which has not been given an outlet because of the force of the repressing ego slips through into conscious life when the force of the repressing agent is reduced at any point in the periphery.

(3) *Psychopathological Phenomena*.^{25, 72, 85} When the repressed content gains greater force in its search for gratification either by the fact that it is repeatedly stimulated or because of changes in this content that makes its repression more difficult, or, finally, where the repressing force of the ego is weakened or in some manner disturbed, the repressed contents may come up to the surface and gain an outlet. When they do so in the face of an environment which does not allow them to be gratified, we speak of symptoms of mental disease. There may be different ways in which these symptoms can overcome the repressed force and come to the surface.

The first is that of getting past the repressing force by virtue of the repressed content being changed in such a way that the perception ego does not recognize it. Here we deal with a number of phenomena that appear as disguises of the original repressed content. They may take the form of *substitution*; by this we mean that instead of having the wish gratified by the original objective, another one which is in some way related to the original may be substituted. This is best exemplified in those symptoms that we discussed under the *conversion* phenomena. Then they may take the form of sending the flow of energy that was repressed originally along some other channel. This is seen in the anxiety states, in guilt feelings, feelings of inferiority, and so on.

They may appear in the original form but as something for which the person himself is not responsible, such as in the obsessive thoughts, the phobias, and in general, those symptoms that were discussed under the heading of Disturbances in Evaluation with the Preservation of the Subject-Object Differentiation. Furthermore, these releases of repressed contents may come through in their original form, either in the shape of a perversion, where the person appreciates that the gratification is frowned upon by the ego and ideal ego but these repressing agents are not strong enough to overcome the force of the repressed content and cannot keep it under the surface, or they may actually transform the outside world in such a way that the ego perceives it as granting permission for this content to appear. Examples of the last we see in those phenomena that have been described as disturbances in evaluation with the loss of subject-object differentiation.

The development of psychopathological phenomena is regarded by the psychoanalytic school as being conditioned by a *regression* of the individual to a fixation point following an unsuccessful combat with the *repressing* forces. The effects of the repression are twofold. To begin with, the activities indulged in or desired at the time of the development of the fixation point had to be given up because they came into conflict with the conventional rules. In other words, they were repressed and remained so throughout the life of the individual.

If, in addition to that, the methods that are considered adequate at the present also meet an obstacle, then the individual begins to recede from the combat and in this goes back until he meets previous methods that can be now disguised in such a fashion that they will be rendered more or less acceptable. These he finds in terms of the above-mentioned symptoms.

The relationship of psychopathological symptoms, dreams and misactions, to the theory of psychoanalysis can probably best be appreciated on the basis of the presentation of an actual case.⁷³ The patient, a girl of nineteen, came to the hospital because of a pain in the right side which she developed shortly after a friend of hers had had an acute attack of appendicitis which resulted in the removal of the appendix. Although the signs were not altogether pathognomonic, the girl was operated upon and the appendix removed. Immediately after she came out of the anaesthetic, she developed a series of abnormal movements which were at first diagnosed as choreic. A closer examination of these motions, however, showed that they were not exactly of the type found in true chorea but consisted of a mixture of defensive and erotic movements. An analysis was undertaken which resulted in the disappearance of these symptoms. The following mechanisms were discovered: The girl's mother died when the patient was very young and she was brought up by the father who took care of those needs that usually would come under the observation of a mother. In his attempts in her early infancy to break her of bed wetting, he was somewhat drastic in his methods of punishing her if she wet the bed, and spent a great deal of time with her during the night trying to get her to urinate before she was taken back to bed. In his anxiety to do all he could for her he pampered and spoiled her a good deal, and she came to be very affectionate toward him to the point of enjoying the nocturnal sessions even though they sometimes ended in her being spanked. The attempts to break her of the habit carried on in this manner only made it worse. She continued her bed wetting in spite of or because of all the attentions that were given by the father. In the daytime during the early childhood of the patient, the father would take her down with him to his butcher shop, because he was afraid to leave her alone in the house, and she would spend the day there observing him in his activities as a butcher, pictures that persisted in her mind as she grew up. The father died when she was about five years old and she was taken into an orphan asylum. She continued for some time with the enuresis but failing to receive the marked in-

terest that she had had from the father, she gradually gave up this habit. The most vivid recollections of the father all through the following years were of those nightly experiences as well as those of his activities as a butcher. With the advent of puberty she began to have definite attractions toward boys but remained shy and prudish on the surface. She would spend a great deal of time fantasizing about having contacts with boys wherein she always imagined her mate as punishing and hurting her at the same time that he showed an interest in her. Outwardly she failed to form any manifest attachments to boys and was considered by them as "stand-offish" and unsociable. When she was about fourteen the inmates of the Home were taken out to a picnic. It was at a time when stories of a "Jack the Ripper" were being circulated, and as the girls went to a picnic ground that was somewhere away from town, they talked a great deal about the possibility of some of them being attacked by this "Jack the Ripper." The girl did not take any part in the discussion but listened attentively. On the trip back on the train the girl fell asleep. While the train was still in motion she suddenly woke up with a scream and in a pronounced excited state in which she threw her arms and legs about in a series of peculiar motions. She screamed and appeared to be frightened. When she finally became more tractable she explained that she had had a dream in which she was attacked by "Jack the Ripper" and that he stuck a knife in her abdomen. The movements lasted for several months. The physician diagnosed the case as chorea and prescribed drugs and rest in bed. The movements gradually wore off and did not reappear until the present attack.

Shortly after that, she was discharged from the Home and went to work in an office. She showed a good intellectual grasp of her work, but in her relationship to people in general, and especially to men, she remained shy and prudish, although she continued her fantasies as they were described before. A short time before the development of the pain in the right side, she became acquainted with a young man who began to show a great deal of attention to her. Contrary to her previous attitude to men she gradually came out of her shell, developed an attachment to the boy and became engaged to him. The pain first appeared when the boy, after the engagement, began to make more intimate approaches toward her. With the development of the pain, she began to lose interest in this man, expressing disapproval of his behavior toward her, and finally broke off the engagement. The first appearance of the pain, as was stated above, followed her actual experience with a case of appendicitis and the operation following that.

As soon as she developed the pain she began to think that she, too, had appendicitis and went to various physicians, telling them that she needed an operation for the removal of her appendix. In her recounting of her experiences at that time, she stated that as she was coming out of the anaesthetic and looked at the person who was engaged in putting on the dressings on the wound, she had the same feeling as she did coming back from the picnic, that is to say, she thought that she had been attacked by "Jack the Ripper." She stated that the movements were actually the direct sequel of her fight against "Jack the Ripper" in trying to ward off the attack.

We find in this case an illustration of the mechanisms that were referred to above and the appearance of the symptoms, both the pain and the abnormal movements, as manifestations of a return to earlier emotional experiences. We find that in early life, at the time when the first signs of the concentration of sexual feelings upon the genitalia usually take place, she was conditioned to associate them with the painful experiences of spanking, as well as the pleasurable sensation of gaining the father's attention in relation to this part of her body. A further conditioning of this type took place in associating the father's activities in the butcher shop with his interests in her as well as her affection to him. She came to combine, therefore, sex gratification with injury to herself, as well as to a certain type of occupation of the man who served as the prototype of men in general. The loss of the father prevented the gradual weaning of her affection from him and its transference to other members of the male sex, but fixed within her the idea of sexual gratification with the father as he was at the time when these early experiences took place.

Her fantasies following that and during puberty showed that she had not emancipated herself from these early patterns of gratification. Her idea of the sexual act was strongly associated with painful experiences and the cutting of meat, this causing not only a certain relationship between such experiences and sex relations in general, but also a desire for such experiences because that was the only expression of objective gratification that she had had in her life. The picnic incident in the form of a dream showed the fulfillment of such a wish

in an essentially normal person. Following that she held to the old methods of gratification but without fulfillment, and at the same time was prevented from reaching for the normal forms of gratification by two reasons: the first was the actual fear of pain and the association of that with sexual relations; the second was the strong attachment to early patterns and the attachment to the father from which she could not break away. The subsequent occurrence of the present illness was a typical example of a similar situation in which, when actually confronted with the possibility of heterosexual relations, she dropped back to the point at which her early sexual interests had become fixed. We see in this case the occurrence of a symptom on the basis of conflicts between the opposing forces as we have outlined them in the theoretical considerations:

1) The conflict between the sexual instinct and the instinct of self-preservation with the resultant repetition-compulsion phenomenon. 2) The manifestation of the failure of maturation as the result of fixation at an early stage of development and the fear of venturing into something that would mean injury to her. 3) The conflict between the perception ego and the id on the basis of the peculiar nature of the desired sex gratification and its close association with the father fixation, both of which were against the standards of society and could not be sanctioned by the perception ego.

Individual Psychology

Following the introduction of the psychoanalytic theory, a number of others have developed in close relationship to it. From a psychopathological point of view we are interested here primarily in those that have contributed to our understanding of the development of mental disease on the basis of ontogenetic factors, and one of the most important in this respect is the theory of *individual psychology* advanced by Adler.^{2, 3} This author made his first contribution under the influence of psychoanalysis but then seceded from it to develop a more or less independent concept. In its essentials it deals with psychological as well as psychopathological mechanisms from

a teleological viewpoint. Adler conceives all mental activities as primarily dependent upon the individual's craving for power and domination over the rest of the world. This is the goal of the individual as he starts in his development. When the individual actually comes to apply this in practice he finds that certain characteristics in himself conflict with this tendency to secure power. In other words, he begins to appreciate the existence of certain inferiorities in himself that make it difficult or impossible for him to attain this power. In an attempt to overcome these obstacles the person may concentrate on these inferiorities and try to build up within himself a more efficient way of dealing with things, or he may compensate for an inferiority along one line, by developing a superiority along some other.

Thus, for instance, the boy who, because of a poor physical makeup, is unable to gain that power which others hold by virtue of physical strength, may attempt concentrated athletic activities in order to overcome his inferiority, or he may compensate for it by concentrating along the lines of intellectual attainments, striving to gain by knowledge and learning those things which other people achieve by virtue of physical strength. The individual, in so doing, may still go on with other activities that are not directly related to this particular inferiority, at the same time as he attempts to overcome or compensate for it. In such cases the goal of the individual, that is, the adjustment to the situation, still remains the central issue and the compensatory activities are only side issues. If, however, the person throws all of his interests into dealing with the inferiority of which he is particularly conscious and loses sight of everything else, symptoms of a mental disease may develop. This would be particularly true if, in trying to compensate for a certain inferiority, the individual tried to excel in a field in which he really had no unusual capabilities. The interests, for instance, of a physically weak and underdeveloped person along mathematical lines may lead him to concentrate entirely in that field, and if he actually has unusual abilities there he may come to be regarded as an important person in that field. In that way the person deals

successfully with a compensatory mechanism. Even here, of course, it is possible to conceive that a person becomes so devoted to his intellectual endeavors that he fails to pay any attention to the field in which he is inferior, and in this way his physical inferiority will become even more pronounced. If, however, he has not the abilities to develop along the line of mathematics, he will fail in the one and at the same time neglect the other, and it is there that mental disease may result. A psychopathological state will develop, furthermore, when the compensatory mechanism is taken along abnormal lines.

For instance, a young, unattractive girl, a member of a large family, finds herself forced into the background by the more attractive siblings. She suffers from her inability to hold the limelight but is unable to find in herself any means of compensating for this inferiority. In her search for attention she may find that attractiveness is not the only means of securing it, but that some people in her environment become the center of interest on the basis of physical illness, incorrigibility, stealing, etc. These considerations offer patterns for a vicarious procurement of attention and the girl may actually concentrate on such methods to compensate for her inferiority.

This is so often a motivating factor that in attempting to understand the behavior of psychopathological persons, we should bear in mind such possibilities. The important thing to remember here as well as in regard to all other special theories, including the psychoanalytic one, is that the different possibilities in mechanisms of human behavior are too numerous to admit of any one universally applicable method of interpretation. Different points of view may have to be used, not only in the approach of different cases, but even in the attempt to understand the various aspects of any one case. The above theories were presented not as the only ones but as prototypes of possibilities along this line. Other theories have been advanced that are of distinct value, such as Jung's analytic psychology,⁵³ and MacDougal's theory of the instincts,⁸⁰ and the reader would be well-advised to acquaint himself with these through the literature. Of a somewhat different nature but essentially the same

purpose are the investigations along the lines of physiology, the most systematic approach being that of Pavlow.

The Theory of the Conditioned Reflexes

One of the most important systematic investigations of the effect of ontogenetic factors in the development of mental activities both in normal and abnormal behavior has been advanced by Pavlow and his co-workers in the investigations of the so-called conditioned reflexes.^{86, 87} Pavlow started out by an investigation of animal behavior, trying to find out experimentally whether all of its phenomena could be regarded as reflex responses akin to the type previously described by Hitzig. He came to see, however, that whereas some of these phenomena seemed to be direct responses to the stimuli, there were others that could not be considered as such. When, for instance, a certain amount of a special type of food was placed into an animal's mouth, it stimulated the mucous membrane and in response to this there was a secretion of saliva qualitatively and quantitatively suitable for the special type of food. However, the secretion of the same type of saliva could be produced simply at the sight of the food or even upon hearing the footsteps of the person who usually fed the animal. To say that the animal has come to learn that these footsteps preceded the actual ingestion of food, that it "remembered" or that it "thought," would not, according to Pavlow, explain the situation in its physiological significance. There must be some special mechanism by virtue of which indifferent stimuli that have nothing to do with food as such can be made to take the place of specific stimuli such as food placed into the mouth.

The first lead in the search of an explanation of this phenomenon was offered by the fact that the indifferent stimulus apparently had to be associated with the specific one on a number of occasions before it could become capable of eliciting such a reaction. Experimentally he was able to prove that any stimulus of a given strength, although in no way directly related to the food, may be rendered capable of causing such

a secretion of saliva if it accompanied the specific stimulus, that is to say, the ingestion of food on a certain number of occasions. Both of these reactions Pavlov considers as of a reflex nature, but whereas the first one is direct and specific in nature, the second one is indirect and indifferent. The first form of reflex Pavlov calls the *unconditioned* and the second form the *conditioned* reflex, by which is meant that a stimulus, in itself, not specifically related to food, has been conditioned to call forth a specific reaction. Such conditioned reflexes can be established at will, experimentally with almost all possible stimuli, provided they can produce an appreciable physiological effect upon the organ, and provided they occur on a sufficient number of occasions in combination with the specific stimulus.

A certain set of rules regarding the development of conditioned reflexes has been established by Pavlov and his co-workers, some of the more important of which are as follows: (1) The indifferent stimulus that is to cause the conditioned response must occur before the presentation of the specific stimulus. (2) The interval of time between the presentation of the indifferent stimulus and that of the specific one must not exceed a certain length, the maximum being about three minutes. (3) The conditioning stimulus must not produce an effect which is diametrically opposite to and stronger in quality than the specific stimulus. Thus, if the ringing of a bell is followed by the ingestion of food after a certain length of time and this set-up repeated on a suitable number of occasions, the animal will be conditioned to react with a secretion of saliva to the ringing of a bell alone, even though the specific stimulus, that is to say, the food, is absent. If, however, instead of a bell, we attempt to use a painful stimulus of a very strong nature, the conditioned response may not be established at all or if it is established it requires a very much greater effort.

This ability to establish conditioned reflexes is an extremely important factor in the adjustment of an animal to its environment. Pavlov is of the opinion that all behavior of living organisms, including the human, can be reduced to either one of

these two types of reflexes, by far the major proportion of reactions being those of the conditioned reflex type. A conditioned reflex in contradistinction to the unconditioned one can be fairly easily established but can also be easily lost, or as Pavlov designates it, *inhibited*. Several forms of such inhibition have been described by Pavlov. The first is the *external inhibition*. This occurs when a new stimulus of suitable strength intrudes itself upon the reacting organism at a time when it is responding to the conditioning stimulus. Thus when the animal responds with the secretion of saliva to the ringing of a bell, and during that reaction hears the sound of a horn, it will cease to secrete saliva, that is to say, the reflex will be inhibited. The second group of inhibitions are the so-called *internal inhibitions*, and of these Pavlov described the following:

(1) The *inhibition of delay*. When the interval of time between the presentation of the conditioning stimulus and that of the specific stimulus is increased to its maximum, the animal will have greater difficulty in developing the conditioned response, but when it develops it the response will occur not at the beginning of the ringing of the bell but some time after that. During that interval, although the bell will ring, there will be no secretion of saliva; in other words, the activity will be inhibited.

(2) The *inhibition of differentiation*. In order to develop a conditioned reflex to a certain stimulus, the latter will have to remain of the same general type throughout the process of conditioning. If it is, for instance, the vibration of a tuning fork, these vibrations will have to be of the same frequency through the whole procedure. If, after the conditioned reflex has been established, a tuning fork of a frequency different than that of the original is produced, the animal will not react to it. In other words, the animal can differentiate between these frequencies. The original ability to differentiate between frequencies or other differences remains within certain limits. The differentiation can be rendered more efficient if it is reinforced in the following way: If after establishing a conditioned reflex to the vibrations of a tuning fork, for instance, one con-

tinues to feed the animal every time this tuning fork is made to vibrate and alternates this procedure with the vibrations of another tuning fork of a frequency slightly higher or lower than the original one without the presentation of food, the animal can be conditioned to differentiate between the two, even if it could not do so originally. This is called the process of *differentiation*, and the failure of the animal to respond to a stimulus only slightly different from the original one, which it would not have been able to do if the process were not established, is again considered as a form of inhibition and is called the *inhibition of differentiation*.

(3) *Inhibition of extinction*. If, after a conditioned reflex has been established, one applies the conditioning stimulus to the animal on several rapidly succeeding occasions without the administration of the food, the reaction to this conditioned stimulus will gradually decrease and finally disappear altogether. A number of other forms of inhibitions of this type have been described, such as conditioned inhibition, inhibition of sleep, and so on. The above, however, serve to show the principles of the development of inhibition.

It can be seen quite clearly that both the establishment of conditioned reflexes as well as their inhibition are of great importance to organisms that live in an environment which is constantly changing. Human beings, as they move about from place to place and live in an environment in which changes, some of them of a very drastic type, may develop at any time, could not secure proper adjustment nor develop the rich variety of reactions to different conditions, if they did not have the ability, not only to react to the immediate effect of a stimulus upon the proper tissue, but also to be able to react to signals of the approach of such conditions. It is only because an animal is able to react to a dangerous situation before his enemy is actually upon him, that he is able to survive for long. The noises made by the approaching source of danger, the visual signals, and other types of stimuli are much more important in helping the animal to adjust properly than the specific stimuli themselves. If, however, the animal were only capable of establishing these conditioned reflexes but not of

inhibiting them, that is to say, if a conditioned reflex once established would always persist, it would lead not only to unnecessary encumbrance of the organism, but even to an interference with the process of adjustment. Thus the ringing of a bell may be conditioned to mean the approaching of a train to a motorist who is about to cross a railroad track, in which case it will serve as a signal of danger, the motorist reacting to it immediately by stopping the car. If, however, the same person on another occasion has to take part in a race where the ringing of a bell signals the starting of the race he will have to start moving instead of stopping as he did in the previous case. The inhibition of stimuli, therefore, as well as their conditioning, is of great importance in the life of the organism.

Just as in the case of normal individuals, so in psychopathological conditions we find this conditioning process as a possible mechanism in the development of certain types of reactions. For instance, if a person some time during his early life has been subjected to the influence of an indifferent stimulus at the same time he experienced a specific one, and this association was repeated on several occasions, the indifferent stimulus may later on, even when it occurs by itself, produce the same reaction that the specific one did in the past. Thus, if a child should be subjected to painful stimuli following the ingestion of a certain type of food, the two may be associated in such a way that the occurrence of either one of the two stimuli by itself may, in the future, lead to reëxperiencing the other. Certain types of idiosyncracies regarding food, antipathies to apparently innocuous persons, unpleasant reactions to sexual stimuli, and others, may be conditioned in this way.

Conditioned reflexes, according to Pavlow, may also develop into the most complicated forms of reactions. One conditioned stimulus, once the reflex has been established, may help in conditioning a new stimulus, and so forth, until conditioned reflexes of the first, second, third, and fourth degree may be established. This may, under certain conditions, give rise to a situation where stimuli of the first order may be in direct opposition to stimuli of the fourth order, and if in addition to that, these different stimuli have also been conditioned to mean

other things, a conflicting situation may result which will paralyze the activities of the individual to a great extent. Pavlow goes on to show that, under certain conditions, reflexes of this type may become particularly difficult to carry out, as for instance where the conditioned stimulus is that of pain and the specific reaction is supposed to produce a sensation of pleasure. A conflicting situation will then be established wherein the person by virtue of his conditioning desires to react to the stimulus, whereas by virtue of the nature of the stimulus itself, he desires to defend himself against it. When such a condition is brought to a climax we will find there that a conflict will result and the person may be rendered incapable of adjustment in general because of this difficult situation. In this way Pavlow attempts to explain a great many of the psychopathological forms of reaction as they are found in mentally diseased persons.

These two theories, then, psychoanalysis and conditioned reflexes, give us an idea of the possibilities for a systematic investigation of the influence of ontogenetic factors. In the one case psychologically, in the other physiologically, we have an explanation of how certain pathological forms of adjustment may be developed on the basis of certain types of experiences during the life of the individual. These two theories, of course, do not cover the whole range of possible mechanisms in ontogenesis as related to the psychopathological reactions. Freud first came out with his theory of psychoanalysis towards the end of the last century, Pavlow at the beginning of the present century. Both before and after them, a large number of other attempts have been made in this direction, although along different lines. Some of them have been brought forward without any relation to these particular trends of thought, others, especially those that have been advanced within the last twenty-five years, are closely related to either one or both of them. The effect of up-bringing and education in producing certain trends or forms of reaction in children which, if of suitable strength, may persist throughout their life, has been recognized for a long time but has been especially emphasized in recent years. We have come to see that such factors as trying

to build up or break habits by indulging the child on the one hand, or being unnecessarily strict and punishing him severely on the other, may produce later on either the establishment of certain fear and pain reactions or in a paradoxical fashion strengthen the habits which one wants to cure, by accentuating them through the type of treatment that the child has received. Some psychologists on the basis of the investigations of Pavlov have attempted to apply the theory of conditioned reflexes to human behavior, in advancing the theory that all mental activities are dependent upon the development of conditioned reflexes or habits. This point of view, which has been particularly stressed by Watson,^{107, 110} has gained an important place in the study of mental activities both of the normal and the abnormal.

It is not necessary to stress once more the fact that in the attempt to understand the role played by ontogenetic factors in the development of abnormal activities, we should not be carried away by any one of these theories to the exclusion of the others. In some situations the causation and manner of development as outlined by one particular theory may be predominant and may have to be stressed, although other considerations should not be neglected. Furthermore we should, in addition to these, carry in mind the possibilities of constitutional as well as situational factors, for all three usually combine in the causation of the phenomena of mental activity.

Chapter XXI

RELATIONSHIPS WITHIN THE SITUATION

PSYCHOPATHOLOGICAL phenomena, whatever their phylogenetic and ontogenetic determinants may be, always take place in a certain setting furnished by the particular situation in which the person lives at the time of their manifestation. It is logical to assume, therefore, that the special relationship within this situation will frequently, if not always, play an important role in shaping the reactions. The appreciation of the direct significance of these factors as determinants, however, offers a number of difficulties. In a general way these difficulties may be described as more or less diametrically opposed to those we found in the case of constitutional factors. There we found the greatest difficulty in ascertaining the existence of the factors as constitutional traits, but, once this was determined, we could easily understand their relationship to the phenomenon produced. Here, however, it is easy enough to gather the facts in the situation, but it is usually difficult to see their logical relationship to the phenomena. In the case of constitutional determinants it may be difficult to determine whether such a characteristic as sensitivity, for instance, is inherited or has been acquired during the development of the individual. Sometimes it is almost impossible to draw a clear line of demarcation. But the development of suspiciousness can be easily understood in its relationship to this characteristic of sensitivity. In other words, knowledge of the factors themselves is not as accessible as the appreciation of their relationship to the psychopathological phenomenon. In contrast to this, when a person is subjected to a lesion of a certain part of the brain that is known to be associated with speech, and develops an aphasia, we can see the starting point of that aphasia, but why certain forms of sub-

stitutions or distortions of words should be developed in preference to others is a fact which is very difficult to explain simply on the basis of the particular lesion that gave rise to the aphasia. The difficulty in this particular aspect of "relationships within the situation" is due mainly to the fact that these outside conditions are not affecting a newborn organism, but are engrafted upon a system which, in addition to this particular cause, has a number of mechanisms in the form of constitutional and ontogenetic factors, which in different types of individuals may lead to totally different reactions.

We must bear in mind, therefore, that in attempting to determine how much the immediate relationships within a situation have to do with the development of certain types of psychopathological phenomena, we will have to try, as far as possible, to determine how many of these phenomena can be accounted for by the phylo- and ontogenetic factors. It is doubtful whether any psychopathological phenomena, however clearly they may seem to follow new situational configurations, can be totally accounted for by these. It is for this reason that one usually speaks of situational causative factors as being precipitating rather than original causes. They are looked at as being release agents which make it possible for certain underlying mechanisms to come to the surface. This is not entirely correct for the new factors in the situation may have characteristics of their own, and within the phenomenon as we see it we can differentiate at times certain features that are necessarily dependent upon these situational factors and can only be explained by them. The phenomenon as a whole, of course, will have to be approached on the basis of all three. It must further be emphasized that in speaking of relationships within the situation we do not mean only those that are sometimes referred to as "exogenous" causative factors. Not only environmental factors but factors within the situation as such, which include the person as well as the environment, must be considered as situational, since they may be new in character and, by virtue of this fact, render certain new types of adjustment necessary.

In this connection it is essential to appreciate the point that

has been particularly stressed by the Gestalt school,^{59, 66} namely, that in the attempt to determine the importance of a given situation in producing a certain reaction, it is necessary to emphasize not only the different component parts of the situation, but also their relationship to one another. In other words, that a configuration of these parts to form a whole situation is of as great if not greater importance than any one of the parts themselves, no matter how unusual they may be. Thus we find that whereas in a certain individual the experience of going through the various emotional influences of a religious meeting may produce a temporary mental aberration in the form of delusional beliefs in the existence of ghosts and spirits or even the actual hallucinations of seeing these things, such a setting may leave a differently constituted and educated person without any appreciable effects in terms of psychopathological reactions. Here, of course, the early conditionings will come into play, but the early conditionings themselves and the constitutional factors in the person will not produce such a mental aberration unless a proper situational configuration is also given. Arbitrarily, and for the purpose of systematic presentation, we may classify these factors into the following groups: (1) social, (2) economic, (3) personal, and (4) cosmic.

Social Factors

The dictum that man is a social animal is a very true one. Man from his birth lives within society. A major portion of his activities take place in direct relationship to society and the different factors within it are of extreme importance in conditioning his forms of adjustment. He has to consider the advisability of acting in one way or another in relationship to society. On the one hand he receives a certain amount of help, protection, affection, approval, and so on, from members of the social group, and in response to these he has to make certain sacrifices. On the other hand, disapproval and punishment, permission for or prohibition of certain forms of behavior, are administered to him by society, and he has to con-

in the individual certain fixed patterns or standards of behavior, which, because of the essential differences conditioned by geographic, racial and other factors, vary with the members of special groups. The group, of course, includes society in general. It includes in it the narrower limits of the family relationship and the broader limits such as the neighborhood, the state, political and national units, and so on.

Situational causes of changes in adjustment may, therefore, be brought in, first of all, when there occurs some drastic or radical change in the group. We need only refer to the strain upon adjustment that has been conditioned by such social upheavals as the late war, or such radical changes as the passage from an essentially agricultural to a machine age, to suggest the possibilities along this line. For example, the transition from the old monarchistic regime to a democratic or communistic form of government, which occurred in some of the European countries after the war, necessitated a radical readjustment on the part of many of the people living in those countries. Of these, the majority will make a successful readjustment, but the others will be unable to do so because of the strong emotional conditioning to the old political regime. A person of this type, even though he has apparently made a superficial adjustment, may, under the surface, begin to brood and become depressed, worry over the loss of the previous feeling of security and, finally, may even develop projections in which he will recreate, autistically, the situation as it was before.

Similar situations are found, for instance, when a person who lived under a certain type of social regime moves to a new environment. We find these difficulties in adjustment in cases of Europeans who have emigrated to America and have been forced to adjust themselves to American customs, beliefs, and values that may be diametrically opposed to those of their own country. The resulting difficulty of adjustment may be expressed in various ways. The commonly encountered reaction of *nostalgia* or homesickness in a great many of these people, leading to all kinds of psychopathological phenomena, is one example. Others may occur, depending upon the individual's

more active forms of outlets, such as revolutionary tendencies on the basis of protest, criminal tendencies in reaction to and as a form of revenge against the unusual types of circumstances, withdrawal from society, different forms of splits within the person himself, and so on. It is not necessary to go on with the details of possibilities in this line. The opposing social implications of the farm and the city, of a fanatically religious home and the enlightened or even atheistic atmosphere of a university, the ease and comfort of an originally wealthy home as contrasted with the dire necessities of poverty that may follow it, and numerous other opposite situations may condition psychopathological reactions. Within the family itself there are also numerous possibilities of this type. The child that has been brought up in a family where certain relationships between the members of the family are standardized, may find it extremely difficult to orient and adjust himself after marriage if he is forced into a new form of environment. The acknowledged relationships of wife and husband in the old regime, that of child to parent, even the accustomed forms of food and dress, and various other in themselves minor changes, may produce a constant state of irritation which will lead gradually or suddenly to the development of psychopathological reactions. Here we will have to remember that the individual characteristics as conditioned by constitutional makeup, as well as by ontogenetic factors, will come into play and must be considered in an understanding of the whole picture.

Economic Factors

The stress and strain of the struggle for existence, especially accentuated by the present-day more complicated forms of government and sociological conditions, may also lead to psychopathological phenomena when drastic economic changes occur. These changes may be of an individual type when they affect only the person in question, or may be of a more general type when they are the result of economic difficulties in the group in which the person lives. Failures in economic enterprises either by virtue of inability of the person to achieve

success or because of difficult situations prevailing in the country, may disturb the balance of a person who, under normal circumstances, would go on adjusting himself quite well. The person may become disappointed in himself, lose confidence in his abilities, and deteriorate from a previously high standard of accomplishment, or he may by way of protest or revenge go in for various forms of retaliation and compensation.

That such reactions may lead to a greater success than was enjoyed before the change in the economic situation, does not at all alter the significance of it, because in itself it is a change in adjustment. It is true that in some cases where such conditions cause a person to give up a certain type of adjustment in preference to another, the change may bring with it greater efficiency in dealing with the situation, and, although we deal here also with a drastic change, we find that it occurs without any psychopathological effects. More frequently, however, we find that giving up the struggle because of difficulties in a situation leads to a lowering of the ability of the individual to adjust to other conditions. With the increase of difficulties, psychopathological forms of adjustment may develop, such as depressions with resulting suicides, displacements and expressions of the loss of confidence by the substitution of complaints of a physical nature, a withdrawal from society in general and a turning toward autistic thinking.

Personal Factors

The individual himself, as a living organism subject to the changes brought about by the flux of time, may go through certain metamorphoses in his status, which make new adjustments necessary. The mere passage of time with the resultant changes in age brings up a series of conditions which require new adjustments. They are recognized throughout the life of the individual and even in normal persons create temporarily minor or major crises in his ability to adjust. The change, for instance, from the status of the protected child within the home environment to the school period, when the person has to take up the fight against members of the group on his own

resources, brings up the first of these possibilities. We find various disturbances in adjustment, some of them still within normal limits, others of psychopathological nature when the child first enters his school career. Various forms of protest against this change, such as the development of homesickness and restlessness at school, the development of certain somatic complaints which are almost intentionally produced for the purpose of staying out of school, inability to concentrate on the work at school, inability to adapt oneself to the classmates or teacher with resulting psychopathological phenomena are quite well known.

Puberty with its radical changes in the sexual as well as social life of the individual is another stage that gives rise to new conditions to which the person has to adjust. The shyness and prudishness of the youth and adolescent, which may lead to an excessive repression of certain tendencies which should be allowed to run their course, a turning into oneself, day-dreaming and fantasy and even minor projections are fairly frequent. The fact that a great many of the psychopathological syndromes are developed at this age is proof enough that this stage in itself is conducive to the release of a number of psychopathological forms of reaction, as well as in itself causative of others. The maturation of the individual and his entrance into the responsibilities of the marital status is another one that brings in demands and sacrifices which the individual may not be prepared to undertake. A great many of the psychopathological reactions are developed in this stage. Depressions, neurotic manifestations, projections of different types, may develop, and although we find almost invariably that the nature of these phenomena is conditioned to a great extent by earlier experiences or by other factors in the situation, the mere drastic change from single to marital state is sufficient to be responsible for such reactions. The birth of children, the necessity of looking after them, of being responsible for a family, the increasing economic stress and strain, again may cause such disturbances.

One of the most important causes of maladjustments in this field is that introduced by the *involutional* state. The change

from a mature person with a future ahead of him socially, economically, sexually, politically, etc., to a person who has reached his zenith and begins to move down the grade, is conducive to the development of rather special forms of psychopathological phenomena. They are particularly well demonstrated in women where the process of climacterium occurs rather abruptly at the stage of the menopause. A great many of the earlier interests and possibilities drop out of the life of the individual and if he has not been able to develop new interests and new fields of activities this will lead to a feeling of hollowness, uselessness, futility, and depression. It may express itself in different forms of protest against the situation, such as an exaggerated striving for those goals that were present before the change, an increase of sexual interests and activities that may go even to the extent of perversions or projections of subjective desires into the outside world. In other cases the individual may give up the battle, fail to find new forms of activities or to devote himself to such activities as are still possible even though the change has taken place. Finally, these dissatisfactions and loss of earlier lines of activity may find expression in substitute reactions in the form of somatic complaints, of fears of disease and death, of vague anxieties and tensions, or of restlessness for which no cause can be given.

In all of these, of course, the sex of the individual plays an important role. The necessity felt by the man of being the active and responsible member of the family brings up a series of special possibilities for disturbances in adjustment, such as fears and lack of confidence in carrying on these activities, misgivings as to the possibilities of being successful, and so on. In contrast to this, the status of the woman in relationship to children, the husband, and society in general will create conditions of a different type. The more abrupt and radical changes in the woman, especially those of the onset and cessation of menstruation with its periodic occurrences throughout her sexual life, brings in other radical changes from the ordinary state which may condition difficulties in adjustment. Sudden emotional stresses and strains and abrupt changes

may also lead to difficulties in adjustment. Special occurrences that are accompanied by emotional upheavals in the individual, such as attachments of different sorts, fears, and losses in the form of death of near and dear persons, may be the starting point of disturbances in adjustment. The disillusionment in certain beliefs, religious, moral, or ethical, by a sudden change in the outside, the destruction of ideals that the person has built up for himself, all may bring about a sudden change in adjustment and result in psychopathological phenomena.

Cosmic Influences ^{36, 43}

The relationship of the individual to the outside is not totally exhausted by his social environment. The universe as a whole, including inorganic as well as organic matter, other organisms outside of human beings, changes of weather or climate, changes in meteorological conditions, and so on, are known to produce definite disturbances in the adjustment of the individual and necessitate changes in the process of adaptation. The whole field of cosmic influences is one that has not as yet been thoroughly investigated and is not well known to us. Ordinarily we can recognize, for instance, the changes that are produced in a person's mood and feelings as well as in his general activities, by such changes as continuous heat or cold, prolonged rainfalls, etc. This is so true that we actually find certain types of generalized characteristics in groups of different geographical localities. The stolid and introverted tendencies of the Northern people as contrasted with the effervescent temperamental behavior of the Southern European are examples of such characteristics which may have a relationship to the climate in which these people live. To the Finn, a cloudy sky and raw, damp weather is something that is in accordance with his mood, whereas to the person who is used to the sunshine, green landscapes and colorful flowers, a condition of this type will be capable of producing a lowering of vitality and a pessimistic outlook. Under certain conditions these may even lead to the precipitation of psychopathological forms of reaction.

Just as one could go to any extreme in speculation as to the depths of the microcosmos within the individual himself, analyzing and re-analyzing various details of experience by introspection, so could we go on with similar extremes in reaching out for the effects upon the human mind of the vast extensiveness of the macrocosmos in terms of planetary movements and relationships, the effects of changes in the consistency and characteristics of the sun and the whole solar system, and so on. The whole field here, however, although very fascinating in its possibilities, does not as yet offer any systematic relationships to definite changes in the adjustment of the individual.

Chapter XXII

ORGANIC DETERMINANTS

OF ALL the problems that at different periods of the development of psychopathology have occupied the center of general interest, there is none that has so consistently monopolized the field of discussion and at the same time so successfully eluded a definite solution as the problem of the *body-mind* relationship. The apparent dualism between the two concepts, *physical* and *mental*, the ease with which certain reactions may appear to be of entirely physical origin and nature, whereas others just as clearly seem to be purely mental, has led a great many people to the assumption that the human being consists of a body and a mind, closely related no doubt, but capable of being approached on a different basis and as existing more or less independently of one another. With the more recent advances in the understanding of the function of the human being as an organism, the influence of the old established, clearly dualistic views has been severely shaken. Nevertheless, students of psychopathology are still earnestly engaged in the discussion concerning the antithesis of *organic vs. psychogenic*, and, whatever else one may think of the nature or cause of any given phenomenon, the question always comes up, is it physiogenic or psychogenic? One cannot attempt to discuss this problem without going deeply into its philosophical significance. Should we accept the Cartesian view of a totally separate mind and body? Should we take the parallelistic view of Spinoza⁹⁹ that mind and body are actually two aspects of the same thing, or the more modern version of this parallelism as given, for instance, by William Stern,¹⁰¹ under the concept of *personalismus*, wherein the person is accepted as an entity, some aspects of which appear to us as psychic and others as organic?

The modern biologist tells us that the individual can be regarded as a system capable of different types of functions and subject to the effects of different types of stimuli. This organism consists of tissues and cells, and when these different components coöperate in the form of a living organism, some of the results of such coöperation are observed by us, as well as by the individual himself, in terms of physical manifestations, others in what one calls mental. The pure materialist might say that no mental phenomenon is essentially different from those which we call physical. In other words, when a person thinks or loves, is afraid or hopes, these functions are necessarily functions of the cells of his tissues. The production of these functions, he would say, again must take place on the basis of effects upon these tissues. When the person is the recipient of a communication of a pleasing nature there is a definite physiological change which expresses itself partly in terms of so-called psychic phenomena. It is possible, too, that one of the few remaining idealists may think otherwise and be convinced that certain activities within the individual are not at all associated with physical changes and are not produced by physical agents. We have at present no way of deciding which of the two is correct. The materialist on the one hand has not as yet been able to show us the physiological substrata of all psychic occurrences; the idealist, on the other, has not been able to convince us that a mental function can take place totally without any relationship to a physically or physiologically functioning organism.

From a practical point of view it is doubtful whether a categorical and incontrovertible statement either one way or the other is essential in giving us an understanding of the activities of the organism as such. Psychopathologically we might say that whether or not any mental function can proceed without a concomitant physiological change and whether or not *all* mental changes or functions have physiological substrata, we can still try to understand these phenomena in terms of the predominant factor. On this basis we can even continue with the connotations, organic and psychic, speaking of them in terms of practical predominance rather than absolute values. Thus, for in-

stance, if a person sustains an injury to the eyes which causes a cessation of their function as visual receptors, we can say that we are dealing with a blindness caused predominantly by an organic or physical factor. If, in contradistinction to this, a person on the basis of being prevented from obtaining something he earnestly desires develops a series of hysterical convulsive movements and a subsequent examination of this person shows that there are no signs of any physical injury or lesion that would account for such a convulsion, and furthermore when the person after having obtained the desired object ceases to have these convulsions, then we can speak of a predominantly psychogenic phenomenon. Practically, this is of still greater importance in relation to the treatment of such conditions, for where the condition has been produced predominantly by physical factors, an attempt will have to be made to remove these factors by a physical method. Where the phenomenon is predominantly of a psychogenic nature, we will deal with it in a psychological fashion and attempt to remove the cause in that way. It is in this sense that we now wish to discuss the effects of organic factors in the production of psychopathological phenomena.

As was stated above in the discussion of ontogenetic factors, we can recognize two sets of organic factors in this respect. (1) An organic agent can produce a lesion in some parts of the body which in and of itself causes a primary psychopathological effect. (2) In addition to this, organic factors may produce a certain change in the individual which will then necessitate a readjustment in view of this change. Under such conditions we will have, therefore, an organically produced effect plus a superimposed psychogenic mechanism of the subsequent attempts at adjustment. It must be emphasized that it is doubtful whether any of the organic causes that we know clearly belong either to the one or to the other. The primary effect produced by the organic lesion may become so thoroughly mixed up with attempts of the whole individual to adjust to such a defect, that it is usually difficult to differentiate which is primary and which is secondary. Furthermore, a readjustment which was at a certain time rendered necessary because of the effects of a

primary organic lesion may continue in its process even after the primary effect has disappeared.

In the attempt to understand the nature of psychopathological phenomena caused by organic factors, we will have to remember, first of all, that we have to consider not only the effect of such an organic cause but also the subsequent readjustment. Furthermore it must be remembered that, although the primary effect is usually associated with the functions peculiar to the localization of the portal of entrance of the organic agent, the whole organism with all its physical and mental aspects then enters into the attempted readjustment. The whole of the subsequent picture will, therefore, have to be considered as related to the total organism rather than simply as the effects of a lesion at some isolated point. In some cases, no doubt, the local effects of the lesion may remain throughout the process of readjustment and continue to affect the individual in that way. For this purpose it is essential, in order to understand these phenomena, to appreciate the specific effects produced by such lesions. In our discussion, therefore, we will have to consider two aspects of the problem: first, the effects of a specific factor as such upon the individual no matter where that factor causes the lesion; and, second, the effects on the local functions of the organ or part of the organism where this injury has taken place. The first we will discuss under the designation of the *specific* characteristics of organic causes; the second under the concept of the local effects within the individual.

The Specific Effects of Organic Causes

We must emphasize at the very outset, as has already been stated, that whatever specific effects a certain organic causative agent may have, it usually combines very intimately with the characteristics of the personality of the individual himself, and secondly, with the attempts at adjustment that are conditioned by the action of this cause but are not in themselves the primary effects of it. The different types of causative factors may be discussed under the following headings:

I. *Traumatic*. By this we mean physical injury to one or

more organs of the body caused by some outside agent. The most important effects of traumatic agents will be the interference with the function of the particular organ or organs involved. These we will discuss later when we come to consider the local effects of organic agents. The specific effects of trauma are very few and depend primarily upon the type of agent that produces the trauma as well as upon certain conditions under which the trauma has been produced. Such occurrences, especially if they are severe in nature, may first of all be accompanied by a serious upset of the whole organism, known as *shock*. This is especially true of those cases where the main organ involved is the central nervous system or some other vital organ of the body such as the heart. If the trauma takes place in a not altogether sudden fashion, and the person has the opportunity of realizing what is happening to him, the fear of danger and pain may cause a profound impression and condition later reactions of fear whenever the setting in which the trauma took place is altogether or partly re-enacted and brought to mind. Even so, it is doubtful whether psychopathological conditions such as traumatic neuroses, fear neuroses, and others are altogether due to these two effects of trauma, because other factors of a personal nature may enter into the determination of these. Generalized trauma to the brain, especially if it causes the severe disturbance of this organ known under the term of *concussion*, may give rise to certain specific character changes which are sometimes described as *traumatic constitution*. They consist usually of marked irritability, lability of mood, decreased tolerance to general excitement and to certain toxic agents such as alcohol and drugs, and of various other phenomena which are associated with a disturbed function of the brain.

Severe traumata, especially if their occurrence has been anticipated for a long time, such as those received by soldiers in the front lines of battle, tend to produce, by virtue of having acted on the person for a certain length of time before the actual occurrence of the trauma, a radical change in the whole character of the individual with a loss of courage, anxiety states, decreased resistance to emotional tension and stress to

which the person would otherwise have been able to adjust easily. It must be remembered that some injuries apparently accidental are not necessarily so. Studies of such occurrences in the army during the last war have shown that some persons, by virtue of a certain type of makeup, seem to be more prone to get into situations which result in such accidents on the basis of certain dissatisfactions with conditions, cravings for adventure, and various other pre-established factors. In such cases, of course, the underlying mechanism finds a solution or an outlet in the occurrence of the accident and colors the results of it to a large extent.

II. *Toxic Agents*. Here we have a series of physicochemical agents, the effects of which upon the individual, either locally or generally, may result in certain psychopathological phenomena. These include various types of drugs administered because of their medicinal value or taken by the individual because of the experiences they produce; the effects of chemicals to which the person is either accidentally or purposely subjected, and finally other physical agents that may act in a toxic fashion such as sudden increases in temperature, the actions of the sunrays, electricity, and various others. Some of these agents act locally and therefore the symptoms produced are dependent upon the functions of those organs that are affected by them, others may have specific effects of their own on the general function of the organism. First among these are drugs.⁶⁵ Of the most important of these we will discuss the following:

(1) *Alcohol*.²¹ This drug has a very definite, specific effect of its own upon the general functioning of the organism. It acts primarily as a depressant, mainly of the higher centers of mental activity. Because of that, it tends to release certain tendencies that have been kept back by the inhibitory effects of conscious thinking and judgment. It produces exhilaration, silliness, sometimes marked irritability and anger, at other times a sort of benevolent and sentimental attitude toward people in general. In some cases it produces sulkiness and introversion, in others it makes people open up to the outside, develop a lability of mood in which the person may easily change from

laughter to weeping. The specific symptoms which it produces in different individuals are very closely related to the personality involved, wherein the release affects especially those activities which have been kept back under normal conditions.

(2) *Morphine*. The effects of this drug in producing certain states of blissful, fantastic experiences have been known for a long time. Because of this effect as well as the sedative pain-alleviating action of the drug, it is prone to produce addiction in some persons. The acute effects of morphine should be differentiated from the chronic effects which have to do with the toxic influence upon the tissues of the central nervous system and are therefore dependent upon the characteristic local functions of that organ. Similar to the effects of morphine are those of other habit-forming drugs such as cocaine, heroin, and others. We must emphasize here that a great many of the so-called specific effects of the drug may really depend upon the personality of the individual who comes under the influence of this drug. It is doubtful, for instance, whether the effects of morphine in producing the tendency toward lying, the effects of cocaine in producing homosexual tendencies, and so on, are really specific effects of these drugs, but are rather the combined results of the previous type of personality plus the local effects upon the tissues which are most frequently involved.

(3) *Mescaline*. This drug seems to be associated most frequently with the production of a decreased contact with the outside, a tendency to introversion and autistic thought, a certain amount of anxiety and tendencies toward hallucinatory experiences. The nature and objective of these symptoms again are largely dependent upon the personality of the individual subjected to the drug.

(4) *Hasheesh*. The most marked specific effects of this drug are the changes in perception, especially of space and time, the hallucinatory experiences and a certain amount of withdrawal from the outside.

(5) *Sodium Amytal*. This drug has recently gained a great deal of importance in the treatment of mental diseases, especially because when given in small doses it produces a marked increase in communicability and allows contact with the per-

son where this was previously impossible. It is used in psychotherapy to bring out experiences which the patient has had but cannot communicate to the physician, either through reticence or because of lack of contact with the outside. In most individuals, normal or abnormal, the effect of small doses of sodium amytal is to produce an increased talkativeness and communicability even where the contents thus divulged may under other conditions be kept back with the greatest stubbornness.

III. *The Effects of Other Chemical Agents.* The effects of the alkaloidal and related poisons are generally local in nature, interfering with the functions of certain vital organs, and because of that are injurious to the individual. Their effects upon the mental activities are mainly on the basis of their toxic action on the brain and the interference with the function of that organ. When used in large doses they will usually produce, as immediate effects, delirium and excitement, sometimes convulsive movements and an interference in the smooth functioning of controlled behavior. When allowed to act over a long period of time and in small doses, some of them will, as in the case of alcohol, interfere with the higher and more differentiated functions of the brain, such as judgment, the observance of moral and ethical codes, and so on.

IV. *Infectious Agents.* These comprise a large number of the pathogenic micro-organisms which affect the central nervous system either in combination with the whole organism or specifically so. The most important of these are as follows:

(1) *Syphilis.* In a certain number of patients infected with syphilis, we may have a specific affection of the central nervous system, wherein the micro-organism causes disease of the cells and other tissues of the brain and gives rise to very marked disturbance of mental activity. One of the most commonly occurring forms of this type of infection is known as *dementia paralytica*, which is an inflammatory disease affecting the different tissues of the brain. Because of its predilection for certain areas in the brain, it tends to produce special symptoms which are frequently found as the controlling feature of the disease. The most important of these are disturbances of memory, judgment, thought processes, mood or attitude, evaluations

(especially those associated with the formation of delusions such as ideas of grandeur), and certain specific types of speech disorders in the form of dysarthria.

(2) *Encephalitis*. This is an inflammatory disease of the brain which occurs in epidemic or endemic form. During the acute stages of the disease it tends to produce sleepiness and lethargy, and because of that is sometimes called "sleeping sickness" or lethargic encephalitis. Other symptoms of the acute stage are clouding of consciousness, delirium, anxiety and confusion. The subsequent sequelae of the disease are general in nature, although two forms are particularly prone to follow the acute attack.

(a) The *Postencephalitic Parkinsonism* which is associated with certain interferences in the motor functions leading to stiffness and jerkiness of movement, fixed facial expression and posture, certain types of tremors of the hands, disturbances in gait, and changes in speech and voice.

(b) The *Postencephalitic character changes* which are mainly manifested in an increased activity and sometimes hypersexualism, a concomitant reduction in judgment and interference with thought processes, a certain "stickiness" and obsessive tendencies in these thoughts, and various other disturbances of functions of the central nervous system. These two are frequently combined, but we may have either the one or the other occurring by themselves.

The infectious diseases that produce general infections of the whole organism and are usually accompanied by such symptoms as fever, disturbances in the functions of the circulatory, respiratory and eliminatory systems, may frequently affect the central nervous system in a profound fashion and produce serious psychopathological conditions such as delirium, confusion, delusional and hallucinatory states, etc. In some of these we find that the disturbance of mental functioning is only secondary to the general disturbances of the system; in others it is due to lesions produced within the central nervous system by the organisms that have gained entrance into it.

V. *The Effects of Other Physical Factors* (electricity, heat, lessened nutrition, exhaustion, etc.). The effects of these are

usually general in nature. They are prone to cause such symptoms as delirium, confusion, excitement, apprehensiveness, restlessness, and various other phenomena that are also found in the other organically produced psychopathological states.

Local Manifestations of Organic Disturbances

During the last few years it has been pointed out, especially by neuro-physiologists who have applied the Gestalt point of view to the study of the function of the central nervous system,⁷⁵ that not only this organ but the whole human being, in reacting to situations of either organic or psychological nature, does so not in the form of a bundle of isolated organs with their specific functions, but as a whole. It is true that the individual may arbitrarily be divided into a series of organs which are most closely associated with certain special functions. In the process of functioning, however, each one of these organs, although serving as the central point of its specific function, acts in close relationship with all the other organs which take part in the particular activity, by adjusting the organism to the special task it has to perform. The specificity of relationship between organ and function, however, must be remembered, especially in cases where any one of these organs is affected by some organic agent in a more or less isolated fashion. Thus, for instance, the arm has a certain set of functions to perform. When it is removed these functions will be affected primarily. But the rest of the organism in adjusting itself to a one-armed existence will undergo changes in all the other organs in relation to the loss of this particular one. Not only can the organism be divided from this point of view into a group of systems such as the cardio-vascular, the nervous, the endocrine, the muscular, the skeletal, and so on, but each one of these systems may be subdivided, also arbitrarily, into components which again are most closely associated with certain special functions.

In regard to psychopathological phenomena we are mainly interested, in this respect, in the nervous system with its special subdivisions. In a general way, the nervous system is divided

into three components, 1) the *central nervous* system, 2) the *peripheral*, and 3) the *autonomic*. Each one of these again is subdivided into special so-called centers, so that in the central nervous system, for instance, we have the brain and the spinal cord. In the brain, again, we have a large number of areas, each one of which is particularly associated with a certain function. Thus, the occipital lobe is associated with vision, the cerebellum with certain forms of control of the motor mechanisms, the anterior portion of the parietal lobe with certain types of sensation, the posterior portion of the frontal lobe with motor functions, the area at the foot of the motor region and adjoining structures with speech, and so on. It is not our purpose here to go into an enumeration of all of these divisions and subdivisions and the functions to which they are related. This belongs more to the field of neurology and neuro-physiology. It is well for the psychopathologist who is interested in understanding the mechanisms of such disturbances to gain as thorough an understanding of these factors as possible.^{38, 39, 62} Here we wish to stress, in a general way, the mechanisms of such disturbances and their relationships to the rest of the personality. It is well to remember, too, that a knowledge of the central nervous system in itself does not exhaust all the possibilities of the effects of local disturbances upon the mental activities. Within recent years, especially, we have come to see that the functions of the organs anatomically outside of the nervous system are very closely related to mental activity and its disturbances. We need only mention the prominence that the investigation of the functions and dysfunctions of the glands of internal secretion such as the adrenal, the pituitary, the thyroid, and others, has gained in an effort to understand the mechanisms of psychopathological phenomena.⁴⁰

In a general way we must say that with the injury of any one of these systems or centers we may get, especially at first, a disturbance primarily located in that function which is most closely associated with the particular locality that has been affected. Even at first, this disturbance includes in it a large proportion of elements conditioned by personality traits either constitutional or acquired in nature. But as soon as the dis-

turbance of function of this type has been produced, there is an immediate reaction of the whole organism, involving to some extent all of its systems, to effect an adjustment to the particular disturbance. The work done by Goldstein^{31, 33} and his co-workers on disturbances of speech and vision are particularly illustrative of this principle.

If we take, for instance, an isolated lesion affecting the so-called speech center,³² we find that the difficulty caused by this in the ability of the person to express himself in language immediately calls forth a series of secondary phenomena in which not only the whole brain but the whole personality coöperates in compensating this individual for the loss he has sustained. The inability to find suitable words for communication may be compensated for by a tendency to economize in the use of words and thus produce a special form of shortening of speech, dropping out of certain phrases and connecting links such as conjunctions and prepositions, a mobilization of other forms of expression, such as gesture, exclamation, laughing or crying, etc., to make it easier for the person to express himself. In such disturbances, furthermore, there may be a greater difficulty in some forms of expression than in others. Thus, for instance, in a person whose mother tongue was different from the language he used at the time of the injury, the earlier, more deeply rooted, and more primitive language may be resorted to instead of the less familiar new one. Emotionally colored words may be easier to express than matter-of-fact statements. Forms of language that are associated with rhymes, singing, or other more or less automatic ways of expression may be easier to produce than prose, and so on. In such cases we find that in reaction to the primary speech disturbance there will be a tendency to fall back on those forms of expression that are easiest. It is because of this that, in the case of aphasia, the symptoms that are observed are usually not only those that are immediately related to the area involved. We find in them, in addition to the primary symptoms which may be small in number, those that have been superimposed on these, as secondary phenomena, conditioned by a tendency to readjust to the difficulties caused

by the injury. The same thing holds true in all the other disturbances of a local organic nature.⁶²

Finally we wish to draw attention to the role played by organic factors as *ontogenetic determinants*. The individual, for instance, who in early life has lost the use of a special organ because of an organic involvement, may show psychopathological symptoms that are due not only to the specific effects of the injury, but are conditioned by the burden of going through life with a certain defect. We have already mentioned the mobilization of the whole organism in its adjustment to such a defect. In this process, all the organs that are mobilized undergo some change in their functioning, but in addition to this, the appreciation by the individual that he is different from other persons in that he is blind or deaf, or has a disturbance of speech or of movement, for instance, makes his position in society rather unusual and will in consequence give rise to the development of attitudes and evaluations of a certain type sometimes reaching into the field of the psychopathological. Any person with a defect, especially an observable one, may become exceptionally sensitive; he may come to think that people are observing him and ridiculing him, which, as a matter of fact, may be not far from the truth. He considers himself, quite frequently, the object of interest by others either because this is really so or because he thinks it is so. As a result new forms of adjustment are necessary and in this readjustment a new series of psychopathological phenomena may appear.

Thus, for instance, we are familiar with the frequent development of projections in the case of deaf people. They cannot hear what the people around them say, but can see their mannerisms and facial expressions, and may come to interpret these as referring to them. On the basis of that, they may begin to develop ideas that people talk about them, that they are being ridiculed because they are deaf, that people plot against them, etc. The development of these symptoms is not necessarily due only to the defect as such, because a great many people with similar afflictions will not develop such phenomena. But given

a certain constitutional makeup and a certain series of characteristics acquired prior to the development of the defect, the person may be prepared for such a form of reaction. It must be remembered, however, that the reaction in itself may never have taken place if it were not for the fact that the person had suffered the particular defect. Having sustained such an injury his previous resistance breaks down and the phenomena develop.

Chapter XXIII

PERSONALITY STRUCTURE (A)

Earlier Concepts

THROUGHOUT our discussion so far we have come to see that the personality of the individual in its function as a whole is not a uni-dimensional structure, but is of a complex nature. From the beginning, for instance, we have spoken of certain features in the activities of the person that are on the surface and others that are below the surface; certain features which are apparent, others which are fundamental; some that are arbitrary, others that are absolute. In our discussions of phenomena we were frequently forced to make the statement that although superficially one may not see the relationship between a certain form of activity and the situation in which the individual finds himself, it may be discovered that below the surface there are very definite relationships between the two. On numerous occasions the depth of certain reactions was discussed. It was stated, for instance, that some people in their interests may be shallow, others deep; some reactions may be fleeting, others intense; some people may in their expressions convey to the outside what they actually mean, others may think one thing and act in an altogether different fashion, and in still other cases the meaning may not be apparent either to the outside observer or to the individual himself. In discussing the constitutional factors in the causation of mental disease, we have, furthermore, often referred to some characteristics that serve as under-currents in causing certain forms of behavior, of which neither the observer outside nor the person himself may be aware. We have spoken of acts of a compulsive nature, for instance, where the person himself as well as the observer

may be aware of the act, aware of its compulsive nature, but not aware of the motivation for such an act. In the primitive activities, the person may be cognizant of the act and of its meaning, but not of the intermediary steps or the reasons for acting in this way. In automatic acts, the person may be aware neither of the act itself, nor of its compulsive nature, nor of the motivation of the act. In the discussion of the ontogenetic factors, finally, we have spoken of repression wherein it was stated that certain feelings, thoughts, experiences, and so on, may be totally unknown either to the individual or to the observer or both. We now come to the question of what the relationships of these different levels or depths are to the personality as a whole, what the nature of them is, and how they function.

Throughout the history of psychopathology, this subject has been of the most intense interest to persons investigating the nature and mechanisms of psychopathological phenomena. Spinoza, for instance, says that the greatest cause of unhappiness is the fact that people are frequently aware of their acts but do not know the causes of these acts, and yet the causes may very well be within the person himself. Somewhere within his personality there may be a level at which these relationships are found. Leibnitz spoke of a certain structure within the person that may gather up perceptions which are not adequate or strong enough to be appreciated consciously, but may, nevertheless, affect the personality after a certain number of them have been accumulated. The question is, in this case, where and in what fashion are these "little perceptions" accumulated, and what determines the fact that they are not perceptible at first, as well as the fact that they come to the surface at a certain time and under certain conditions?

Within recent years workers in the field of psychopathology especially have undertaken more or less systematic attempts, starting from different points of view, to gain insight into the nature of this structural aspect of the personality. We find the first important attempt at such an explanation in the French school, especially in the works of Janet.⁴⁹ We have already mentioned the investigations of this group in relationship to

the so-called "dissociation" phenomenon. Having come to appreciate that a person may sometimes manifest a sudden change in his personality, act for a greater or lesser period of time in a certain definite way, and then come back to the previous form of activities with no remembrance of what has occurred during the interval, they have advanced the view that the person is capable of splitting his personality into two or more streams. While the one is within the center of awareness, he is said to be of one type of personality, and the other part that has been split away remains hidden and fails to gain the attention and appreciation either of the person himself or the outsider. There is as yet, in this method of approach, no definite attempt made to understand the reasons for such a split or the dynamics and relationships of the two or more streams of consciousness. Nevertheless, we find here the first mention of such things as consciousness as contrasted with subconsciousness.

*The Psychoanalytic System: Conscious, Unconscious,
Preconscious*

The psychoanalytic school, with the first and most important of its principles represented in the concept of *repression*, could not go on with the further investigation of the theoretical and practical significance of this process unless it also attempted to determine, descriptively as well as dynamically, the nature of these different levels of the personality. As a matter of fact we find here the first systematic attempt to appreciate these relationships. In consequence the psychoanalytic theory advances the idea that in the personality there are three such levels, the conscious, the preconscious, and the unconscious. They differ in their manner of development, in their methods of functioning, in the degree of their accessibility to the outside observer as well as to the person himself, and in the contents that are present in each of them. We will present a description of these three levels of personality structure especially in relationship to the discussion of the psychoanalytic theory (v. p. 282).

(1) *The System of consciousness.* From a point of view of

its observability by the outsider as well as by the person himself, the contents and manner of functioning of this level are the most superficial of the three. In a way it may be considered as the sum total of perceptions, past or present, of which the person is aware at a given time. It is because of this that the conscious system is sometimes referred to as the perception system. It is primarily related to the functions of the perception ego, and stands on the periphery between the person as an inner being and the outside. It observes the occurrence of things on the outside and stimuli that come from within. It contains all those functions that we have discussed under the heading of *intellection*. By that we do not mean that the contents of this system include all the mechanisms or determinants of these functions, but just the phenomena which can be observed as belonging to them. In it the material in the form of perceptions and imagery is arranged in the proper time and space relationships and according to logical categories. As we have already mentioned in the chapter on the phenomenology of behavior, consciousness must be extended further to include awareness, by which we mean that not only ideational material is included in consciousness, but also states of feeling and tension that may come into it as stimuli from the other structures of the personality. Although one may not appreciate why and whence they come or their definite relationships to other material in the consciousness, one may be aware of them nevertheless. Thus a person may be aware consciously of a feeling of anxiety and yet not know the object of his apprehension. Similarly he may be aware of feelings of restlessness, happiness or depression, and various other such phenomena. Coming as they do from the other structures of the personality, their bases remain within those structures and only the peak of the content, called by the psychoanalysts the conscious *representative* of an unconscious content, may reach this awareness. In a similar fashion a large number of elements that at one time have been more or less completely conscious, may be wholly or partially forced out of the field of awareness by pressure from the outside or from the ego. Thus there is a mutual interrelationship between the conscious and the other

levels in that its contents may and usually do have representatives from the un- and preconscious and vice versa. In dealing with unconscious factors, only a symbol is retained by the conscious mind, that is, some sign or indication that signifies the existence of a content beyond the reach of consciousness.

(2) The *Unconscious*. In contradistinction to the contents of the conscious system, those of the unconscious by very definition are those of which the person is not aware. In it we deal primarily with the fundamental phenomena that have been discussed in the psychoanalytic theory under the name of the *id*. It is primarily the field of the sexual urge and that part of the ego which we have discussed under the concept of the self-preservation urge, with some of their representatives. The conscious mind is ontogenetically of a later development than the unconscious. The former develops at the same time as the apparatus of perception, and in its development is very definitely related to the reality principle by the fact that it functions under its guidance. Only those things are allowed to remain in consciousness that are permitted by this reality probing. If a content is contrary to the reality principle either because of considerations of the perception ego as such, or because of outside pressure, these contents will tend to be repressed into the ontogenetically older level of the unconscious.

The unconscious works under the control of the pleasure-pain principle; its mainsprings are those of the fundamental urges, and it has no need for logical categories or proper time and space relationships. It needs no reality probing and, therefore, no logical categories. Whereas in the conscious we deal with such questions as: is a certain thing proper? is it real? is it logical? the unconscious deals only with one principle: is it desirable? It contains the fundamental urges as well as the original objectives of these urges. For, in the tendency of an urge to reach its goal, it becomes attached to certain actual objects which at that time represent the possibility of gratifying the urge. Whether or not originally this gratification was allowed, if at any time it is prohibited by the outside world or by the perception ego, it is then relegated as an unfulfilled de-

take the gratification of the desire to nurse at the mother's breast which is primarily conditioned by a fundamental urge. As long as it is permissible and adequate it may remain in toto within the conscious mind, both as desire and its representative. When the reality principle forces the individual to give up this form of obtaining gratification and yet the desire for it still exists, it will be repressed by the ego and be relegated to the unconscious to remain there as an ungratified desire.

It is these contents that are primarily responsible for the development of dreams as well as symptoms of mental disease. Dreams may be remembered by the person after he wakes up and thus the unconscious contents gain entrance into the conscious mind. Obsessive thoughts, conversions, projections, and numerous other psychopathological phenomena also come into the field of consciousness, and the question is: how do they gain entrance there? They do so by the process of *elaboration*, by virtue of which the unconscious contents overcome the pressure of the perception ego and gain conscious representatives. The first process in such an accession of unconscious contents into consciousness is that of the *primary process*, or elaboration. This primary process of changing unconscious contents into ones that will later reach the surface, consists in changing the originally unpermissible object of gratification into some related object which is not in itself prohibited by the perception ego. Thus, for instance, a person who is unconsciously dissatisfied with the existence of a younger sibling and desires its removal because it takes away the affection of the mother, may shift the responsibility of removing this person from himself to the outside world. He may dream that this sibling is killed in some accident. Some of these contents may not need any further elaboration if the form of gratification is entirely acceptable to the ego. In most cases, however, this is not so and a further elaboration is necessary for the sake of presenting this unconscious content to the conscious mind in acceptable fashion. This, which the psychoanalytic theory regards as the *secondary process* or elaboration, takes place in a level which is located between the unconscious and the conscious, and is known as the preconscious

(3) The *Preconscious*. This system, as has been suggested above, serves as a link between the conscious and the unconscious systems. In it we find certain conscious contents which, because of their relationship to repressed unconscious ones, are not permitted to remain in the conscious mind. We have already referred to these in the discussion of dreams. We have spoken there of certain occurrences in the everyday life of the individual where some stimulus, which is closely related to an unconscious content, comes to the attention of the individual. Because of the danger of bringing up repressed material from the unconscious, it is forced out of the conscious mind, but as it, in itself, is not necessarily undesirable, it remains only related to the unconscious but not actually in it. In the dream it serves the purpose of stimulating the primary process in producing those conditions which facilitate the fulfillment of completely undesirable unconscious desires. Similarly it is related to the unconscious in that it takes up certain of its contents which, even though they have undergone primary elaboration, are not as yet ready to enter the conscious mind. If, for instance, the individual in his unconscious urge to possess the mother needs two objectives for the gratification of such a desire, that is to say, the removal of the father as well as the actual possession of the mother, we can conceive of the first of these two entering the conscious mind on the basis of a primary elaboration, by dreaming that the father is destroyed by some outside force. But the actual possession of the mother is still undesirable to the conscious mind. Here a metamorphosis must take place in that the mother is changed into an image or symbol, such as an unknown person or an object that at one time was associated with the mother, which will permit the whole experience to gain entrance into the conscious mind.

In one dream, for example, a patient who had a very strong attachment to his mother goes through the following experience: He is walking along a lonely road when an old woman comes up to him and asks whether he would guard her house, because she is afraid that a burglar is about to enter it. He comes into this house and establishes himself in one of the rooms where he watches for the burglar. Finally, a dark figure of a man is seen to enter through the window; the patient shoots

at him and kills him. Then the old woman comes into the room and tells him that now he can take possession of the house. In associations in this dream the patient associated the old woman with his mother, whereas he failed to recognize the man. During the same analytic hour in the continuation of the associations, he began to talk about his fear and hatred of his father whom he regarded as cold and strict and who objected particularly to what he called his wife's "sentimentalizing" over the patient.

We see, then, that by the process of primary elaboration the patient was placed in the position in which he could get rid of the man and gain possession of the house in which the old woman lived, but the house and the old woman represented the mother and her affection for him, whereas the man was the representative of the father. The dream itself evaded these direct issues, in that through a process of secondary elaboration they were represented only symbolically to his conscious mind.

The attempts at the systematic presentation of the structure of the personality that we have discussed so far show at least one thing in common and that is, that the approach in such theories is taken from the point of view of the degree of observability of different contents within the personality. The mere connotation of conscious and unconscious or subconscious in itself represents the fundamental principle to be, whether a given content that is known to exist in the personality is observable or not. However, the two main theories discussed above differ in that whereas the approach undertaken by the French school is mainly descriptive, that of the psychoanalytic theory is fundamentally dynamic. In the latter, although the starting point is the same as in the former, that is to say, the investigator finds that in psychopathological phenomena some of the contents may be observable and others may remain outside of awareness and, therefore, are unconscious, nevertheless, instead of remaining on the level of only describing the state of affairs, the psychoanalytic theory goes further. It tries to probe the dynamic relationships between the different structures of the personality, the reasons why they come to be as they are, and the manner in which they function both in themselves and

in the interchange between the different structures. In all the theories so far discussed, we find that two important aspects of the problem have not been dealt with. First of all, the approach is taken on the basis of the investigation of psychopathological material only, deducing from that certain similar relationships in normal behavior. Secondly, the whole approach, instead of being taken from the point of view of the personality as a whole, is taken from the point of view of some particular aspect of it. In the psychoanalytic theory this aspect is represented by the energy relationships of the different urges between themselves and to the forces outside of the individual. In the French school this consists in the rather didactic interest in the possibility of one given person being able to establish a split within himself so that he acts at one time in one way and at another time in a different way.

Impulse, Temperament and Character

Within recent years attempts have been made to obviate these difficulties primarily by starting out with a study of the personality as such, regardless of the consideration of any special functions. One of the most interesting and consistent of these attempts is the theory advanced by Eugen Kahn in his investigation of psychopathic personalities.⁵⁴ Although there, too, the author is primarily motivated by his attempt to understand certain psychopathological phenomena, that is to say, the so-called psychopathies in their relationship to the different structures of personality, nevertheless the attempt starts out with a discussion of such structures in persons in general, regardless of whether they are normal or abnormal. This attempt is undertaken on the basis of certain theories concerning character formation, mainly those of Klages,⁵⁵ in his studies on the foundations of the science of character, and those of William Stern, in his concept of the personality as a psycho-physically neutral whole.^{100, 101}

Briefly stated, Kahn considers the whole personality with its different phenomena as being reducible to three main structures, namely, *impulse*, *temperament*, and *character*. By im-

pulse Kahn understands "an animal vital urge toward an ultimately biological satisfaction of need." In his discussion of the impulse he starts out with the fundamental consideration of the psychoanalytic concepts of this factor although he is of the opinion that the great importance attributed by Freud to the impulses as the mainsprings of human mental activity are not quite justified. He regards impulses as emanating immediately and primarily from the physical structure of the organism, their satisfaction creating pleasure and the failure of satisfaction creating pain or displeasure. The stimulation of the impulse can be effected not only through physical but also through psychic stimuli which thus may initiate a physical cycle fundamental to the particular impulse aroused. These impulses may be either those of sex or of self-preservation, both of them being of equal importance. He considers an impulse or an impulse process to be found at the root of all, even the most complicated, psychic activities. It may, in its transformation into phenomena which are subsequently observed by the investigator, be disguised in a fashion which makes it difficult to see the fundamental importance of the primary effect of an impulse, but nevertheless, on deeper investigation, this can be shown always to be true. The other two structures, temperament and character, are really superimpositions on the fundamental impulse. By temperament he understands the manner in which the impulses show themselves. It is "the transformer for expression of the physical in general and of the impulses in particular, upward, to the level which we call character." On the other hand, he also considers it as the link from the upper level, that is to say, character, towards the impulses and the physical.

The relationship between the three can be expressed as follows: The temperament is nourished and put in motion by the physical and the impulses but it is steered in its expression to the outside by the character. These impulses, then, as the foundations of human activity and their transformation in terms of temperament for the sake of expression are guided in their actual expression by the character, and, therefore, character may be defined as "the directedness of the personality or

the steerage toward a definite goal." We thus see that in mental activity in general, the fundamental source of energy in a phenomenon is conditioned by the impulse. This impulse is molded in its "tone, excitability, affectivity, and life mood" by the level of temperament and is then expressed to the outside under the aspect of the steering mechanism of character. In terms of adjustment we might say that a certain energy value of impulse, when expressed in the proper form or temperament and directed in a certain way, leads to what we call "normal adjustment." Whenever any one of these is for some reason disturbed in its function or whenever the interrelationship of the three, even though none of them suffers a disturbance in itself, is in some way thrown off its balance, we have an abnormal form of adjustment. The psychopathies, according to Kahn, are expressions of abnormal adjustment because of some kind of a deviation in any one of these three structures or in their mutual interrelationship.

It is not necessary to go into the details of Kahn's application of this principle to the classification and description of the different types of psychopathies. We can see how a qualitatively and quantitatively abnormal impulse in itself may give rise to abnormal adjustment, how a qualitatively or quantitatively disturbed expression of even a normal impulse may do the same and, finally, given an essentially normal impulse with a normal modification of it by temperament, the directedness in itself, if it is different than in the normal, may lead to a disturbance in adjustment. Finally, psychopathological states may result from abnormalities in the interrelationships between these three structures of the personality. Without going into a detailed discussion of the actual shortcomings of such a theory or of a defense against criticism that may not be justified, we can say that, in general, it can be considered as a definite step in the progress of our attempt to understand the structures of the personality. The most important feature in the theory is that it does not necessarily depend upon primarily psychopathological or normal conditions, but that it deals with the personality and adjustment as such, regardless of whether the outcome of this is good or bad, successful or not. The next

important feature of it is that it deals with the personality as a whole, considering the descriptive as well as the dynamic, the phenomenological as well as the absolute aspects of personality. It is not like the other theories dependent upon any special factor in the personality, but attempts to deal with it from all phases of human activity.

It is impossible at this point to undertake the presentation of a number of other theories, some of which have added a great deal to our understanding of the subject; a presentation, furthermore, which is not absolutely essential for the purpose which is to be served. The practically-minded student of psychopathology must have already gained the appreciation that none of these theories is so perfect as to be universally acceptable or applicable. At the same time it is evident that one cannot approach the appreciation of the patient as a whole, i.e., the understanding of the interrelationships and interdependence of the phenomena and determinants, without some systematic basis of personality structure. If we exclude the unqualified acceptance of any one theory as it is dogmatically presented by its exponents, we are left with the only alternative of constructing a concept of our own, in which the acceptable components of theories advanced by others will be harmoniously blended with our views and built up around the practical issues that serve as the starting point of our investigation. It is with this in mind, and primarily for the purpose of indicating the lines one would follow in such an attempt, that we wish to present in the next chapter an analysis of personality structure built up around the concept of adjustment.

Chapter XXIV

PERSONALITY STRUCTURE (B)

THE THEORIES that have been advanced by different observers in the attempt to present systematically the structure of the personality, at least the ones we have discussed in the previous chapter, have given us a starting point in the form of an insight into the problem as well as leads that one could follow in further investigation of it. First of all, they have shown us that an appreciation of the different structures or levels in the personality is not only of theoretical but also of practical importance. Most investigators in psychopathology will admit that an unbiased and critical application of these concepts is very helpful in the understanding of its nature, and in the treatment of the phenomena in this field. In fact, certain relationships between a given psychopathological reaction and the rest of the personality would not be understood if we were not aware of the existence of these structures and the relationships between them. We find, furthermore, that in each of the three theories discussed, we have new features added to the old ones, that make our knowledge so much more adequate. Thus we find that the important factor contributed by the psychoanalytic theory, in addition to what was already known on the basis of the investigations of the French school, is the concept of dynamic relationships between the different levels of the personality, the appreciation of certain tensions leading to repressions with the possibility of subsequent freeing of repressed material, and, finally, the important developmental aspect in the evolution of these functions. The concept of a certain type of hierarchy, which at first glance may appear to be a theoretical construction of no practical significance, is actually of importance both in understanding the relationships

between the different levels and the reasons why some are nearer to our everyday life than others. The evolutionary aspect that was brought in by psychoanalysis provides a logical foundation for the theory of levels. It helps us to appreciate the fact that the personality does not consist of a single addition of these components, but that as the person develops new needs are introduced which require new methods of adjustment that are superimposed on the old ones.

There are, however, in all of these theories certain features that tend to make them somewhat one-sided. Thus we find that both the theories of dissociation and psychoanalysis regard the *unconscious-conscious* antithesis as one of the most important features of the problem. Although in the case of the psychoanalytic theory the center has been shifted towards the dynamic aspect of the structure of the personality, the fact that the very names of the levels remain as they were before tends to emphasize the observability of the contents as an important feature. In addition to this we find that the proponents of both of these theories have attacked the problems of the structure of personality as such, mainly on the basis of experience in dealing with psychopathological forms of mental activity. They have both, especially the psychoanalytic school, come after a while to apply these concepts to normal life also, but the imprint of a psychopathological starting point persists and is probably one of the major causes of the difficulties in their practical application.

The theory advanced by Kahn has made an attempt to overcome these two difficulties. Starting out from the concepts of Stern and Klages, Kahn approaches these structures of the personality, first of all from a point of view of mental activities in general, rather than psychopathological as such, and secondly, from a point of view of the whole personality rather than some special aspect of it. This point is extremely significant and the contribution is of undoubted value in that it offers a new line of attack in the investigation of these structures. But this theory is not without its weak points, one of the most prominent of which is the lack of unity in the categories proposed. In an attempt to structuralize any complex on

the basis of establishing certain categories within it, one must have a fundamental unity of concept in these categories, which makes it possible to compare and contrast them for the purpose of bringing out the essential differences between them. We find this very well illustrated in the unconscious, preconscious, and conscious structuralization of the psychoanalytic theory. All of them are fundamental concepts of similar values, but the contents of each one as well as their manner of functioning is different. We do not find this unity of concept in the impulse, temperament, and character structuralization. We start out with impulse as the first fundamental category, and instead of coming to another one of similar fundamental value, we find that temperament is really only a quality of impulses, and in the third structure, that of character, we are introduced into a system of values which is again essentially different from the two previous ones. In other words, whereas in the first we deal with content, the second and third deal with form, and one cannot conceive of a classification in which the primary categories are in different "universes."

To summarize, then, we have learned from the preceding theories that the structuralization of the personality and the classification of the contents of mental activities into certain fundamental categories is not only of theoretical but of practical importance; that in doing so, we should be able to appreciate these categories not only from a point of view of description but from a point of view of the functional relationships and, finally, that these categories if they are to be logically applicable to the study of human nature should be of equal fundamental importance and yet of clear-cut differentiation as far as their contents and functioning is concerned.

With this in mind we wish to advance a concept of the structuralization of the personality based to a large extent upon the investigations of previous workers but with the attempt to obviate those features that we considered as faulty in the above outlined theories. In such an approach we would, first of all, want to deal with the structures as applicable to mental activities in general, rather than isolating some special

concept or series of phenomena of it. Our first problem will be to find some fundamental feature in mental activities that is of importance as representing the activities of the whole personality, and at the same time one that is fundamental to normal as well as abnormal mental activities. In discussing the differences between normal and abnormal in mental activities, at the very outset we suggested that as a standard of such differentiation we can use the concept of adjustment, wherein different types of adjustments could serve as the standards of comparison for the different types of mental activities. When the resultant adjustment is of a certain type, we speak of these mental activities as being normal; when it is of another type, we speak of them as being abnormal. Furthermore, we find that from a practical point of view adjustment can be regarded as expressive of the whole personality and not of any special sector in it. It is logical, therefore, in starting out in our effort to establish a system of personality structures, to use as a basic principle the concept of *adjustment*.

In its broadest sense adjustment can be regarded as the expression of the phenomenon characteristic to all individual entities, viz., the *urge to exist*. All measures that are taken in the adjustment of the organism flow from this mainspring of activity. Whether or not the methods that are utilized in the adjustment of the individual organism actually result in assuring its existence does not alter the fact that the starting point was along that direction. This concept of adjustment as an expression of the urge to exist, makes it possible to regard this process not only as the fundamental principle of all the activities of human beings, but as applicable to all living organisms and to substance in general. With this as a general goal in the adjustment of any individual body to a given situation, the methods utilized in securing adjustment will differ depending upon the means the individual has at his command, as well as the conditions to which he has to adjust. In our previous discussions, especially in the introduction, we have come to see how closely the individual is related to his environment and how difficult it is to separate them, so that for practical purposes both the means at his disposal and the conditions

imposed by the environment can be considered as one complex, i.e., his *adjustment organization*. Thus we come to the appreciation of the fact that the methods utilized in the adjustment of any given individual are related to, or even dependent upon his special organization.

If we should now want to isolate any special group of entities, in this case human beings, for the purpose of appreciating their special methods of adjustment, we would have to determine two sets of such methods: 1) Those which are found in all individually existing bodies and which they, therefore, share with the others. 2) Those which they have by virtue of being individuals of a special type or organization, i.e., those that are peculiar to human beings, and which differentiate them from other entities. Theoretically one could argue that there are no two individuals that have exactly the same type of organization, and, therefore, cannot be absolutely alike in their methods of adjustment. Practically, however, we find that all existing individuals can be divided into a relatively small number of groups on the basis of fundamental differences in methods of adjustment and, although the members of each group may still show certain more or less minor differences, these can be looked upon as deviations within the scope of the more fundamental categories. In this way, therefore, we can say that human beings in their adjustment have certain methods which are common to all individual bodies, others which they share with a smaller number, and, finally, such that are distinctly peculiar to them as human beings.

Our attempt to outline these is made possible by the fact that human beings reach the acme of their maturity by a process of evolution, each stage of which shows certain similarities in organization to other types of individuals, and, therefore, also shows similar types of adjustment. As they pass from one stage to another they do not discard the older methods, but retain them in a modified fashion, the newer acquisitions being superimposed on the previous ones. This would mean that in the human being we will have representatives of the methods of other types of organizations modified and controlled by those that are distinctly peculiar to them. The process of evolution, both phylogenetically and ontogenetically speaking, is in the main a grad-

ual one. At certain points, however, more drastic changes take place, and with them comes the need of more radical departures in methods of adjustment. These radical changes in organization and adjustment can be taken as a basis for classification of entities in general, for the evolutionary steps that take place between these points can be regarded as secondary in significance and as serving the purpose of reshaping these methods in their application to special conditions. As we follow the evolution of man from the inorganic substratum of all matter through the passage into the stage of organic structure, and then to the level of organization of the higher animals, we find three such radically different stages:

- 1) The level of *inorganic* matter.
- 2) The level of *organic* structure, which brings in the features of growth and multiplication.
- 3) The level of *motile* organisms, which brings with it the aspect of change from one type of environment to another.

The human being, by virtue of his evolution, will retain representatives of the methods of each one of these stages, modified and controlled by those methods that are necessary in his adjustment as a specially organized type of individual. In common with all other types of inorganic and organic matter he expresses in his adjustment the feature that is fundamental to all existing individual bodies, viz., that of *self-assertion*, which is the controlling feature of inorganic matter. As a departure from this, and in common with all organic matter, he acquires the tendency to grow and propagate himself, i.e., the feature of *accretion*. Finally as an organism that is not rooted to its place, but moves from one set of conditions to another, he acquires the method of appreciation of relationships, i.e., the feature of *ratiocination*. This last is the controlling method in the adjustment of human beings and the activities emanating from the other two aspects are modified and governed by it. If we regard all the activities of a person as expressions of adjustment in the broad sense of the word, we can distinguish in these activities three groups in relation to these three fundamental methods. But as the controlling feature of this form of adjustment is ratiocination, man, in his attempt to appreciate the essentials of his own adjustment, will

have to look at the other two features, i.e., self-assertion and accretion, through the medium of the third. In the human being, therefore, these can only be observed indirectly and, for that purpose, it is best to analyze the first two in relation to such entities around us that seem to adjust primarily on the basis of those two methods. This we propose to do in the following fashion:

Self-Assertion

The first fundamental feature of the urge to exist, expressing itself in a method of adjustment which we have in common with everything else that we can see about us, is that of *self-assertion*, that is to say, the need which we have to assert "ourselves" as existing individuals in relation to our environment. Whatever else any one type of organization undertakes in its attempt at adjustment to given situations, it always shows this one, the assertion of itself as an existing individual. This expression should not be confused with the more restricted concept of *self-preservation*, as it has been by a number of investigators. Self-preservation is, in itself, only one form of self-assertion, in which the individual asserts itself by resisting the tendencies of others around it to destroy it or end its existence as an individual. In addition to this, however, self-assertion may express itself in the form of what one might call *self-extension*, wherein the individual body tends to occupy as much of the space around it as is possible. We can further differentiate these two by stating that self-preservation is self-assertion of individual existence in *time* (i.e., the tendency to retain this existence as such for the longest possible period of time), whereas self-extension represents the effort to assert the individual's self in *space*.

Although we will see later that in some of the more differentiated forms of organization these two may combine so that one individual may have both of these tendencies, we find that in other forms of organization they may exist, if not entirely separately, at least predominantly so. We find them especially manifested as such, in the world of inorganic matter. Self-assertion in the form of self-preservation is the predominant feature in *solids* as we see them. There we find that the most predominant

feature in adjustment consists in the tendency of the individual body to continue as such, for the longest period of time. This tendency is expressed in the form of a passive *resistance*. In these bodies we find very little, if any, tendency to occupy more *space* than that already possessed by them. In contradistinction to this we find that in fluid inorganic matter, such as gas, we have a minimum of the tendency of self-preservation but a preponderance of self-extension. Given a body of gas contained in a vessel, we will find that the most marked tendency in relation to its surroundings will be to press against the walls of the containing vessel in an attempt to occupy more space, whereas the tendency for self-preservation as a body is at a minimum. In fact, the different molecules or atoms of the gas not only do not tend to adhere to one another but actually repel each other. This tendency of self-assertion in the form of self-extension is essentially *aggressive* and active as contrasted with the passive resistance of self-preservation. We must emphasize once more that these two tendencies, although we have discussed them mainly in connection with other types of organization, are nevertheless definitely present in human beings as well. That is to say, we, too, show the tendency toward self-preservation as well as the tendency toward self-extension through space. But because of a different form of organization these two can be seen to have been superseded by other forms of adjustment and express themselves only under their control.

Accretion

The most important and most radical differentiation in organization as we can see it in bodies around us is that which exists between organic and inorganic matter. The central feature in this differentiation is the fact that in organic matter as contrasted with the inorganic, there is a combination of both the tendencies described above; in other words, organic matter shows, in a more or less equal proportion, the mixture of self-preservation and self-extension. An organism as contrasted with inorganic matter tends not only to maintain its individual-

ity, but while doing so also tends to occupy more and more of the space around it. In other words, we have here the introduction of a new feature in organization, namely, *growth*. In this new type of organization we find a new need in adjustment which did not exist in non-growing bodies. In self-preservation, without the necessity of increase in space, the only adjustment that is essential is that of resisting the outside. In self-extension, where the body tends to extend into space but has no need of keeping its individuality, the only adjustment necessary is that of an aggression against the outside. Here, however, a new feature comes in, that of incorporating parts of the outside in order to guarantee the existence of the individual at the same time it is growing to occupy more space. For that purpose it becomes essential to be able to differentiate the objects outside oneself and take only those which when incorporated can be transformed into a substance similar to the organism itself, that will add to the bulk of the individual without destroying it.

This new need in adjustment brings in the necessity of a new form of relationship to the outside, that of *selection*. In self-preservation the whole environment is treated in the same way, that is, by resistance. In self-extension again the whole environment is treated in the same way, by aggression. Here, however, the environment has to be split up into different units, some of which are to be accepted, others to be rejected, and at the same time resistance and aggression must be exercised. But resistance and aggression become superseded by the new attitude of selection because in order that the tree may grow, for instance, it has to admit certain substances to enter into it, which self-preservation as such would not allow. In order that the tree might remain a tree and not disperse itself into atoms through the universe, it must also curb its aggressive tendencies. This new need in adjustment, therefore, based on the fact that a new form of organization, that is to say, the one of growth, has been acquired, brings in not only a new feature in adjustment but also has to have this new structure superimposed on the old one, which means that, at times, it

actually has to inhibit tendencies which otherwise would be allowed to run their course.

In this new feature of growth and its corollary of selection we find, therefore, that the relationship of the organism to the outside changes in such a way that it splits the outside into two different groups of substances, some of which are acceptable, others of which are unacceptable. Furthermore, some are more acceptable than others, and similarly in the rejection of substances some are more definitely rejected than others. Thus the necessity of choice, for the sake of making growth possible, brings in what we can consider as a prototype of *affect* in human beings, that is, a certain qualified interest in or relationship to different things in the environment.

As we go up in the scale of organization, however, we find that growth introduces additional features closely related to it, but conditioning further departures in adjustment. An analysis of these can be approached on the basis of the biological aspects of growth. Growth, as we saw before, is essentially dependent upon a combination of aggression and self-preservation. Where both of them are equal in proportion the body will go on growing, that is to say, incorporating and assimilating substances from its environment. In the growing body we find the equalization of both these tendencies most typically expressed on the periphery of the organism, where there is an opportunity for them to be expressed. But in a manner, as the organism grows, we find that in the center of it we will come to a situation where the gratification of self-preservation gains a predominance over that of self-extension. For whereas the tendencies of self-preservation can still be expressed in the phenomenon of adhesion, whereby the existence of the individual is guaranteed, those of self-extension will fail to gain expression, for it is only at the periphery that the body can expand without coming into direct clash with self-preservation. Thus a state of affairs results in which some of the forces in the organism cannot be expressed, and remain in the form of unexpended energy. In a manner as the body grows, therefore, and the force of this unexpended energy grows in proportion, we will reach a point where these will overcome the self-

preservative tendencies and will turn on to the body itself, causing a split of the body into two. This brings in the aspect of splitting or multiplication of growing bodies.

As we follow the phylo- and ontogenetic development of the human being we find that, in addition to this feature of cell multiplication, two others come to the surface, one as a logical sequel to the phenomenon of growth, another as an offshoot from it. Growth, as we observe it, starts with a simple increase in size of the particular individual by virtue of cell division as well as cell enlargement. However, this aspect of growth is limited, and when the individual has reached a certain stage of maturity it is replaced by the phenomenon of *propagation*, by virtue of which one or more new individuals are split away from the mature one to go on and develop by themselves, and this cycle is repeated indefinitely. In this way the propagation of the species replaces the further growth of the original individual, and may even replace its continued existence as such an individual.

This phenomenon brings with it a series of new features in organization as well as adjustment, the two most striking being that of social grouping (in its broader sense) and motility. The first depends upon the rather specialized type of relationship that is conditioned between individuals that come from the same original stock. Between these we find the establishment of a peculiar form of ambivalent attitude. The splitting away of new individuals from their progenitors having been primarily conditioned by an excess of aggressive tendencies, will naturally continue to repel one another, thus introducing the tendency to *move apart*, with the search for new environmental settings and a certain degree of independent existence. But the original bonds of attraction conditioned by the self-preservation tendencies causes the preservation of different degrees of attraction and dependence. Both of these seem to decrease in proportion to the progressive development in time, the strongest bonds of attraction, with, at the same time, the greatest urge for independent existence most frequently occurring within what we might call the family circle and diminishing as we proceed towards the larger groups. These, of course, depend

very materially upon accidental environmental factors, which may introduce marked variations. The paradoxical nature of the combination of these two features is further enhanced by the fact that the types of entities that show a strong tendency towards the so-called "herd" form of existence, are also prone to show a pronounced urge toward movement and spreading through space. Thus we find that plants, which represent the type of growing bodies which seem to manifest the minimum of social attraction and dependence, also show the least tendency toward movements, whereas in human beings both of these are very highly developed.

This new development in the scale of organization that embodies in it the strong urge to move ahead in the face of the pronounced attraction to the original source; the desire for the new combined with the attachment to the old; the orientation towards the future engrafted upon the profound significance of the past, brings with it the necessity of as pronounced a departure in the methods of adjustment as was conditioned by the introduction of the phenomenon of growth. The vegetative existence of the growing body, as we observe it in plants or as we can conceive it in the embryo, is primarily concerned in the "present." The attitude of selection towards the environment seems to be determined by *immediate* considerations, a state of affairs, which in psychoanalytic terms could be considered as dependent upon the pleasure-pain principle. With the introduction of a multidimensional existence both in time and space, with the necessity of considering the present in its relationship to the past and its consequences in the future, with the appreciation of the "here" in its possible relationships to the "there," etc., a new function in adjustment has to be added to those of self-assertion and accretion, viz., that of the *appreciation of relationships*. This new function, the nature of which we can investigate most efficiently in the human being, we wish to call that of *ratiocination*.

Before we go on to the discussion of ratiocination we wish to refer to the second of the two features introduced by the phenomenon of growth, which was mentioned above as an offshoot of this phenomenon, viz., that of *heterosexuality*. In the

case of most of the organisms the propagation of the species is not carried out by simple cleavage of the individual but through the activity of special sexual or genital organs, the function of which is expressed in this process. The term "heterosexuality" refers to the fact that within the given group the single members fall into two types, the male and the female, and the reproduction of new members can only be accomplished through a union of these two. The nature of this differentiation and its relationship to the aggressive and resistive tendencies of self-assertion are problems that belong more properly in the field of biology. In the study of adjustment the important point is that this feature introduces further complexity in the relationships of the particular individual to his environment. It introduces special phases in the attitudes and the choice of interests at the different stages of development. It also contributes further incentives in the search for new environments on the basis of the necessity of securing the mate, the obstacles that have to be overcome, etc.

Ratiocination

This new aspect of adjustment can be regarded as the function which deals primarily with the determination of relationships. In the human being this determination consists of arranging the various contents of a situation according to their occurrence in time and space in terms of logical categories such as causality, meaning, value, etc. It must be emphasized that this refers not only to external or environmental contents, but also to occurrences within the individual himself. The human being is actually aware of the need of this determination in relation to any content that makes its appearance in a given situation. This means, therefore, that the urge for ratiocination arises in relation to all those activities that emanate from the functions of self-assertion and accretion and even out of ratiocination itself. In this sense, and in this sense only, can ratiocination be considered as the controlling feature of the mental activities of the human being. The other two urges persist, for the individual still tends to preserve itself as such and

also tends to grow in order to occupy more space. Just as the function of growth can only take place when the urge for self-assertion is controlled by that of selection, so, too, selection and the aggressive-resistive tendencies have to be fitted logically into relationships around it. Thus we see that the human being not only takes things from the outside that are acceptable and rejects those that are not, but these have to be considered from the point of view of the advisability of such choice in relationship to things that have happened before and things that are coming ahead, to objects that are above or below, behind or in front, and so on. All of the tendencies in the individual, therefore, even though they will retain a certain amount of autonomic independent existence will, before they are gratified, be subjected to the scrutiny of the function of ratiocination.

These three aspects of adjustment, therefore, must be regarded as primarily in an organism which has an organization of the type that we find in the human being. In order to continue its existence it will have to retain all of them, but retain them in a certain relationship to one another and under the aspects of a certain hierarchy. This hierarchy is not based upon the strength or the importance of these methods of adjustment, but upon the existence of a certain energy relationship between them. In some cases it may be found that the tendencies of self-assertion, when they do not come into clash with the other two, will find their natural outlet without any resistance from the others. Where, however, such tendencies are not in accord with either one or the other, they will be kept back or repressed. The same is true with the relationship between the tendencies of accretion as related to those of ratiocination. A complex arrangement is reached, therefore, in which the controlling feature on the surface, in the adult individual, is that of ratiocination. Related to it are those activities which are conditioned by the fact that this rational organism is also a growing organism, and finally that in addition to both of these the organism is also a self-assertive body.

In terms of the phenomena that we have discussed above in the sections on phenomenology, we will find that the mental

activities that have been discussed under the aspect of intelligence are activated primarily by the necessity of ratiocination, those that have been discussed under feeling, attitudes, emotions, and so on, that is to say, where selection is the main characteristic of activity, and where the acceptance and rejection principle is functioning, are mainly activated by the tendency to grow. The characteristics of resistance and aggression belong, on the other hand, to the aspect of self-assertion. From a practical point of view we can draw an analogy between the psychoanalytic system and this point of view by saying that ratiocination is at the level of consciousness in the personality, whereas growth and self-assertion are mainly related to the unconscious; but it must be emphasized that in the conscious mind we will find the awareness of both of the other tendencies even though the processes themselves may not be represented in it. Between the three, the aspect of tension is that function wherein ratiocination may oppose tendencies of the other two, whereas accretion may come into clash with the tendencies of self-assertion. Normal adjustment is conditioned by a special form of relationship between these three structures of the personality.

Energy, as we know it from physics, and as it has been so aptly applied in the psychoanalytic theory, must have an outlet, and when the functions of ratiocination obstruct the usual outlets of the tendencies that spring from the other two structures, a point may be reached where these tendencies will gather sufficient force to enable them to find other forms of outlets. In a way we have already seen how the self-assertion tendencies may find an outlet in the form of causing a division of the individual when they are repressed to a pronounced extent. Similarly the accretion tendencies of the individual, if repressed beyond a certain degree, will find their outlet either in a disguised form or in an open break against ratiocination. In the normal individual we find these expressions in different ways. The psychoanalytic theory has already shown how in dreams and in mis-actions the repressed tendencies come to the surface whenever they find a weak spot in the repressing ratiocination. As these three structures vary in the manner or

degree of their functions, new forms of adjustment will appear, which may, because of these unusual circumstances, interfere with the primary need for existence and actually endanger the existence of the individual by causing certain forms of abnormal adjustment. It is on this basis that we may have the development of symptoms of mental disease.

PART IV

PSYCHOPATHOLOGICAL SYNTHESIS:
REACTION TYPES

Chapter XXV

SYSTEMS OF CLASSIFICATION

Concerning Synthesis in Psychopathology

THE PHENOMENA that we have discussed in the chapters on phenomenology have been presented in terms of isolated manifestations of mental activities. We have emphasized before the necessity of appreciating the fact that isolated phenomena do not exist as such but that they always fit into a certain picture of adjustment. Whenever any single one of the functions of behavior or experience is disturbed so as to produce a psychopathological phenomenon, all the other functions of the individual are changed in such a way that they fit into a new type of adjustment which we then call a mental disease. In mental diseases or psychopathological reaction types, we usually find the occurrence of a series of psychopathological phenomena that are indicative of the change of the whole personality in its adjustment to the new circumstances. In dealing with mentally diseased persons, therefore, we have certain fairly well-circumscribed pictures, in which phenomena of certain types occur together and lend a distinctive aspect to each one of these pictures. In psychopathological synthesis we will deal with the classification of the phenomena described above into more or less distinct psychopathological pictures. The problem of classification in general, but especially in psychopathology, presents certain difficulties which are complicated by the variety of possible angles of approach. Before undertaking a discussion of the validity of any special system of classification it is well to appreciate some of the more frequently utilized basic principles:

- (1) The *descriptive*. This is the oldest, but from the point

of view of a logical approach of psychopathology, also the least adequate of the forms of classification. It deals primarily with the grouping of the phenomena, on the basis of the frequency with which they occur together in mentally diseased persons. Thus, for instance, if we find empirically that a certain number of mentally diseased persons all show a given series of psychopathological phenomena as the controlling features of their abnormal activities, these phenomena are collectively grouped as parts of that picture. In this way a large number of all the observable phenomena can be classified descriptively into disease entities. In this method of classification one does not necessarily take into consideration the causation of these symptoms, the course which the disease runs or the type of treatment indicated for such a disease.

(2) The *etiological*. In this method of classification the phenomena would be grouped together on the basis of the causative agents, regardless of the frequency with which they can be found to occur in the same person. Thus, for instance, if a certain form of experience in the early life of the individual should frequently be observed to lead to the development of a certain series of phenomena, we could designate that group as one entity. If another etiological factor, such as an infectious organism, could be shown to lead to the development of a series of other phenomena, we would have a second entity, and so on. From the point of view of its practical value as well as reliability this method of classification would probably be the best one, provided it were possible. As it is, however, at the present time our knowledge concerning the causation of mental diseases and, more especially, the causation of certain specific phenomena, is so inadequate that an all-inclusive etiological classification is practically impossible.

(3) The *prognostic*. A third form of classification may be undertaken on the basis of the ultimate result, in terms of the adjustment, to which these phenomena lead. Thus we say that a series of phenomena may be known to be only temporary in nature and after their disappearance will leave practically no effect upon the personality of the individual, so that a normal adjustment is possible after this temporary disturbance has

disappeared. We could then designate them as constituting one disease entity, as contrasted with another which is made up of phenomena that lead to a more profound disturbance and which do not permit a return to normal adjustment. This, as a matter of fact, is a form of classification that has been made use of in a great deal of the practical clinical work in mental diseases. An all-inclusive classification on this basis, however, is just as impossible as is the classification on the basis of etiology. First, a large number of phenomena more or less similar in nature will in one individual be of good prognosis and in another individual of poor prognosis, depending upon the other factors with which they may be associated. Secondly, we do not as yet possess a thorough and incontrovertible knowledge of all possible outcomes of the different specific phenomena or groups of them. Finally, of course, a classification of this type is purely arbitrary and tells us very little about the nature of the phenomena, their causation, and so on.

(4) The *Therapeutic*. This method of classification may be undertaken on the basis of the ease with which certain phenomena lend themselves to treatment. Here we could say that if a certain series of symptoms can always be treated in a certain way and by certain methods, we could call them group A, whereas another series of phenomena for which another form of treatment is necessary could be classified as group B, and so on. The difficulties encountered in an attempt of this type are mainly conditioned by our limited knowledge concerning the best forms of treatment for different phenomena. The fact is that certain forms of treatment may, in one individual, be applicable to some symptoms, whereas in another individual the same symptoms would call for a different form of treatment.

Other forms of classification are possible, of course, but we feel that the four that we have discussed above give an adequate idea of the problems involved. In practical work, as a matter of fact, the clinical psychiatrist has come to appreciate that since he is as much interested in the pictures presented by certain types of mental disease as he is in their causation, in the prognosis as in the treatment, it is, pragmatically, impor-

tant to combine several forms of classification with one or the other predominating. Actually the classification used in clinical psychiatry is a combination of several different methods of approach. To the psychopathologist who is not interested in the practical treatment of mental diseases, the accepted clinical classifications are of interest only inasmuch as in the literature as well as in dealing with the observation of mental diseases he may come in contact with names that have been attached to certain pictures in the usual clinical classification. It is because of this that we offer in this chapter a résumé of the accepted classifications of mental diseases as they are used by the clinical psychiatrist. This classification may be described as follows: *

Psychiatric Clinical Classification

The different types of abnormal mental adjustments are first of all classified into two large groups depending upon whether they are, primarily, *congenital* (constitutional) or *acquired*. Within these two large groups we have further divisions in which more or less distinct entities are described.

I. CONGENITAL OR CONSTITUTIONAL FORMS OF MENTAL ABNORMALITIES

We deal here with a series of clinical pictures that are characterized by the fact that they lead to abnormal forms of mental activities, the causes of which seem to have existed throughout the life of the patient. Whether the causes of these reactions can be considered as purely constitutional is questionable, as we have already shown in the chapter on constitutional characteristics. The fact that an individual whose development starts with a normal constitution may acquire certain abnormal forms of adjustment by virtue of diseases in prenatal life, and, in contradistinction, the fact that constitu-

* In this classification a number of textbooks of psychiatry were followed. The *Statistical Guide* of the Department of Mental Hygiene of the State of New York was of particular help.

tionally conditioned abnormal forms of adjustment may only show themselves at later stages in life, renders the implication somewhat hazardous. However, allowing for a certain margin of possible error, we can say that a definite group of mental abnormalities may be regarded as predominantly congenital or constitutional in nature. This large group is again divided into two types:

(1) *Feeble-mindedness*. By this we mean a defect in the intelligence of the individual that, as far as we can know, has existed ever since his birth or early development. We must remember that feeble-minded persons may develop symptoms of other types of mental diseases in the same way as persons with normal intelligence. Under such conditions the psychiatrist speaks of the particular disease being *engrafted* on an original mental defect. In addition to this, mentally defective persons may develop mental diseases that are primarily dependent upon the low intellectual level. Panic reactions, childish hallucinations and delusions and outbursts of impulsive activity are among the more common symptoms of these diseases. In psychiatric nomenclature these are designated as *psychoses with feeble-mindedness*.

Depending upon the level of intelligence we recognize three subgroups in the mentally deficient persons.

(a) *Idiocy*. These persons show an intelligence which is below that of a normal child of three years. In these cases the level is so low that they cannot guard themselves against the common physical dangers. Training and education is, of course, impossible, and they have to be looked after in the same manner as small children.

(b) *Imbecility*. The level of intelligence here is that of children between three and seven years of age. These cases are incapable of managing themselves or their affairs, but can be trained to perform simple tasks, look after their bodily needs, and can develop habits that are within the scope of these age limits.

(c) *Moronism*. The level of intelligence here is above that of imbecility and up to that of a twelve-year-old child. With proper training these persons can be taught to take care of

themselves and to adjust themselves efficiently to simple situations without supervision. They cannot, however, cope with more complicated problems which require an average function of intelligence.

(2) *Constitutional Psychopathy*. Under this heading is grouped a number of mental abnormalities, all of which are characterized by original defects in any of the psychic functions outside of intelligence. The most frequently occurring types in this group are those associated with emotional instability, hypersensitiveness, deviations in the sexual functions, and disturbances in the direction of the general behavior activities (Introversion-Extraversion). The psychopathies are closely related to a number of other mental disturbances and it is frequently very difficult to differentiate them. In the first place, we often find that feeble-minded persons may show deviations in the function of other psychic components. The problem that presents itself there is whether the disturbance in these other functions is the result of an impaired intelligence alone, or whether we are dealing with a combination of a psychopathy and an intelligence defect. Then we find that in a large number of cases of acquired mental disease there is present a preëxisting defect in the personality which served as the constitutional predisposition to the disease. In such cases the personality of the patient may have shown all through his life a defect which, at times, can only be differentiated from a psychopathy by the fact that the patient finally develops the disease process. When we add to this the fact that psychopathic personalities may sometimes develop mental diseases in addition to their psychopathy, we can realize how difficult it may be to make a definite diagnosis. The mental diseases that develop in psychopathic personalities may belong to some of the other groups and then we speak of a process *engrafted* upon a psychopathy, or they may be primarily dependent upon the personality defect itself, in which case they are known as *psychoses with psychopathic personality*.

The constitutional psychopathies are classified according to the particular personality component that is deficient. The scope of this presentation does not permit a detailed descrip-

tion of the different types. For this the reader is referred to text books on psychiatry and to the special literature on this subject.⁵⁴ Here we wish to mention only some of the more frequently occurring types:

(1) The *cyclothymic*. In these cases we find a deficiency in the mood control. A more detailed discussion of this type and a representative case will be found in Chapter XXVIII (v. p. 403).

(2) The *schizoid*. These persons are characterized by a dystony with their environment and an egocentricity of their interests. A case illustrative of this type will be found in Chapter XXIX (v. p. 419).

(3) The *sexual psychopaths*. Here we meet with various aberrations from the normal sexual adjustment, with the occurrence of different forms of perversions, such as homosexuality, sadism, fetichism, etc.

(4) The *pathological liars*. These persons show a pronounced tendency to a special type of confabulation (v. Chapter VIII, p. 131).

Of the other types of psychopathies we might mention the emotionally unstable, the kleptomaniacs, the litigious cranks, the eccentrics, etc.

II. THE ACQUIRED MENTAL DISEASES

Here we deal with a series of clinical pictures of abnormal mental activities that appear in persons who have not previously shown such reactions. They are further subdivided into the *psychoses* and *neuroses*.

(1) The *psychoses* are severe mental disturbances characterized by more or less complete breaks with reality. Some of them seem to be primarily due to organic disease and are known as the *organic psychoses*. In others the organic factors do not seem to play an obvious role, and they are designated by some as *constitutional* and by others as *functional* depending upon whether the phylogenetic or ontogenetic factors are considered of greater importance. As was mentioned before, a differentiation of this type is not absolute in nature, but means that in

the one case the organic factors predominate, whereas in the other they are not so obvious as the functional or, perhaps, the constitutional.

(A) The *organic* psychoses. These are divided into a number of disease entities mainly on the basis of etiology and the underlying pathological change:

(a) Psychoses due to *organic brain disease*. Here we have the mental diseases caused by brain syphilis such as dementia paralytica (general paralysis), psychoses with cerebro-spinal syphilis and tabes. This group also includes the psychoses caused by other infectious organisms when they affect the brain (e.g., *Epidemic Encephalitis*). Finally we find here the mental diseases that are due to cerebral arteriosclerosis, to brain tumor, to senile degeneration of the brain and others of the same type. The different diseases in this group have certain peculiarities of their own but also present a number of common features. The most important of these are the pronounced intellectual deterioration (memory, judgment, orientation, etc.), changes of mood such as lability, euphoria, or, more rarely, depression, and, in some of these diseases, confusion and delirious states. Hallucinations are not very prominent. Delusions of a naïve and loosely-constructed type may occur quite frequently.

(b) *Symptomatic* psychoses. These are disturbances in mental functioning which are incidental to or symptomatic of infections or other general somatic diseases. We find in this group the delirious states that may accompany such diseases as typhoid fever, pneumonia, etc., the mental symptoms found in cardio-renal disease, pernicious anemia, hyperthyroidism, and similar conditions.

(c) Psychoses due to *exogenous* poisons. In this group we deal first of all with the mental diseases that are due to alcoholism. These may be characterized chiefly by an acute onset, fear, confusion and visual hallucinations as in delirium tremens. Auditory hallucinations and delusional formations may be in the foreground as in the chronic and acute hallucinoses. Finally we may have the deteriorating alcoholic processes.

More or less similar types of mental disease may develop in association with the use of other habit-forming drugs.

(B) In the second group of psychoses we deal with clinical pictures, in the production of which organic factors do not seem to play as obvious a role as in the first. Quite frequently they develop in relation to certain experiences in the interchange of activities between the person and his environment; in other cases we find the hereditary factors to be of great importance. They are grouped as follows:

(a) *Manic-depressive* psychoses (also referred to as the affect psychoses or mood disturbances). They are characterized primarily by vacillations in mood and a tendency to recurrence with comparatively free intervals. They may occur in the following forms:

Manic reactions with feelings of well-being or irascibility, flight of ideas and overactivity.

Depressive reactions with feelings of guilt, inadequacy, despondency and retardation. They may also show restlessness and apprehension and are then designated as *agitated* depressions. In the climacteric period we often meet depressions of an agitated type with somatic delusions, and these are referred to as *involutional melancholias*.

Mixed reactions with combinations of both the manic and depressive phases.

(b) *Dementia praecox* or *schizophrenia*. An adequate understanding of this group must be obtained from the textbooks on psychiatry. They are chiefly characterized by defects in interest and discrepancies (splits) between thought on the one hand and the behavior-emotional reactions on the other. There is a pronounced tendency for intellectual deterioration and emotional blunting and the development of peculiar, delusional trends of a loosely-constructed type. Hallucinations, silly mannerisms, negativism, resistiveness, impulsive activities, and motor disturbances are other frequently-occurring symptoms. Depending upon the features that control the picture we may have the following types:

Paranoid with a prominence of delusions and hallucinations.

Catatonic in which negativism, resistiveness and stupors, on the one hand, and excitements with impulsive behavior on the other, control the picture.

Hebephrenic. Here there is a pronounced tendency to silliness, grimacing, absurd and grotesque ideas, and, usually, rapid deterioration.

Simple. These cases are characterized by defects of interest, gradual development of an apathetic state without delusions or hallucinations.

(c) *Paranoia* and *paranoid* states. In this group we find cases which show fixed suspicions, persecutory delusions, dominant ideas of grandiose trends, logically elaborated and with due regard for reality after once a false interpretation or premise has been accepted. These are characterized by formally correct conduct, adequate emotional reactions, clearness and coherence of the train of thought.

(2) The *psychoneuroses* (or *neuroses*). The *Statistical Guide* referred to above (see footnote p. 370) defines these as follows: "Disorders in which mental forces or ideas, of which the subject is either aware (conscious) or unaware (unconscious) bring about various mental and physical symptoms; in other words, these disorders are essentially psychogenic in nature." We distinguish the following types:

(a) *Hysteria*. Here we find episodic mental attacks such as delirium, stupor or dream states which are followed by partial or complete amnesia. Physical disturbances, either motor or sensory, may also occur and are spoken of as conversions.

(b) *Psychasthenia*. The characteristic features of this type are phobias, obsessions, and compulsions.

(c) *Neurasthenia*. The outstanding features here are easy physical and mental fatigability, feelings of inadequacy, vague sensations of pressure in the head and spine, etc.

(d) *Anxiety neuroses*. These are characterized by feelings of anxiety, gastro-intestinal disturbances, attacks of precordial pain, etc.

Finally we must mention a series of mental disturbances that may occur in association with other mental or nervous dis-

turbances. We have already referred to the psychoses with feeble-mindedness and constitutional psychopathy. Other types observed are the psychoses with epilepsy, with Huntington's chorea, and similar conditions.

Chapter XXVI

SYNTHESIS ON THE BASIS OF PERSONALITY STRUCTURE

The Disadvantages Introduced by Certain Methods of Classification

THE FORM of classification discussed in the previous topic, and which is the one usually employed in the practical work in clinical psychiatry, is of great importance and help to the physician who deals with mental diseases. The different types described under the separate disease entities have a more or less definite set of symptoms that characterize the clinical picture. In some of them we may have an understanding of the etiology and the manner of development, even if in the others we are not so fortunate. In all of them, however, a certain course of progress can usually be expected, which makes it possible to render a prognosis as to what will take place once the diagnosis can be made. In all of them, furthermore, certain types of procedure as to treatment and management have been devised, in some cases on a rational basis, in others empirically, and with varying degrees of success. The psychiatrist, in order to be able to carry on his work in a systematic way, must have a thorough knowledge of these different disease entities, which will make it possible for him to make the proper diagnosis for the purposes of management, treatment, and prognosis.

Even in clinical psychiatry, however, there has been noticed, within recent years, a definite tendency to pay less attention to the diagnosis of the disease entity and to concentrate more on the understanding of its nature, especially in relationship to its development as a response to given situations.⁸² To the psychopathologist this differentiation between pure diag-

nosis and adequate understanding is even more important than to the physician. For, whereas the point of primary importance to the physician is the ability to treat and manage a given case of mental disease, the psychopathologist has as his primary goal the recognition and understanding of the phenomena of mental disease in terms of certain types of adjustment. If we then take away from the classification described in the last chapter its value as an aid in diagnosis for the purpose of prognosis, treatment, and management, we find that we are left, as far as the psychopathologist is concerned, with a series of more or less distinct pictures, which, in themselves, are not necessarily related to the understanding of the development or the nature of the psychopathological phenomena. In addition to this the whole classification is not established on the basis of any one given principle. Thus, as we look through the different disease entities, we find that in some of them the essential feature is the descriptive one, as for instance in the diagnosis of a delirium, whereas in others the establishment of the disease entity is made on the basis of the prognosis as, for instance, is particularly true of the old concepts of manic-depressive psychoses and dementia praecox. In still another group, the deciding principle is that of etiology, as in the case of dementia paralytica, alcoholic psychoses, and so on; and, finally, in some of these groups, the manner of and the reason for the development of the disease seems to be the deciding factor, as is the case in the concept of the psychoneuroses.

The Difficulties Encountered in Categorizing Human Behavior

In addition to the drawbacks that may be found in any special form of classification, one must take into account those that are introduced by categorization in general. Psychopathological investigations, no matter what their original starting point or the attitude of the particular investigator, inevitably lead one to the appreciation of the fact that patients with mental disease are primarily human beings. It is true that they may differ from others by the peculiar form of their behavior, by

the lack of harmony and efficiency in their adjustment, by the unusual or even bizarre forms of their mental contents. With all that, however, they retain the richness and complexity that is characteristic of all human beings and the element of individuality peculiar to them. It is because of this that psychopathology, in common with all other fields of investigation of human behavior and experience, in its attempt to construct a systematic appreciation of the material with which it deals, will sooner or later have to face the difficulties introduced by attempts at categorization. Man and his environment constituting a dynamic, ever-changing system will always retain the characteristic of historical uniqueness, which means that each person has his own particular life history, occurring only once, its exact like never having existed before, nor ever to be duplicated afterwards. The possibilities of the constellations of settings and experiences are so immensely rich that no single one of them can be said to be exactly like any other. It is true that in a given number of persons we can abstract certain common features for purposes of comparison and thus be enabled to classify different human beings into groups according to the presence or absence of such features. When one undertakes that, however, it very soon becomes apparent that in regarding the members of a given group in the light of their relationships to these features we are dealing with constructions that may be of significance in practical work but do not represent the person as he actually is.

To understand the relationships between a given person and the medium in which he lives, and to appreciate the cause and effect relationships between certain occurrences and the reactions that follow them, it is not enough to establish the category to which this person belongs, but one must undertake an investigation of the life of this particular person. It is one thing for a student of human nature to observe and portray the characteristic reactions of a particular person, such as, for instance, the description of the character of Smerdiakoff in Dostoyefsky's *Brothers Karamazov*, and an altogether different thing for one to write about the so-called "epileptic personality." In the first case we deal with the deep insight of a genius into the

occurrences and experiences of a single human being with all its rich ramifications and possibilities; in the other, we have a pale and abstract construction of several features that have been observed to be common to a number of people who have a certain type of disease. Similarly, Shakespeare's Falstaff represents to us a human being with certain interests and habits, inclinations and aversions, weaknesses and commendable traits, all of them peculiar to this particular individual. In contradistinction to this we have the artificial construction of a cyclothymic or extraverted type which merely gives us a schematic and arbitrary structure that is probably never really true of any one person.

It is because of this that psychiatrists and psychopathologists, in their attempts to understand the persons they are studying, have come to show an increasingly progressive tendency away from classification and toward analysis of individual problems. By this one does not mean that classification is useless. As we have already pointed out repeatedly, no systematic approach of any field is possible without a certain organization of the material according to definite categories. Without such an organization we could write novels or poetry, we could paint or otherwise depict specific individuals. But our efforts to establish a scientific presentation of a subject that deals with more than one particular individual would end in a hopeless muddle unless some form of order is followed. The fault with classifications is not in using them but in becoming enslaved to them. So long as one remembers that the group characteristics that we attach to a given individual are merely common denominators which do not exhaust all the possibilities in any given member of the group, classification is of great help. But when we begin to pigeonhole human beings into water-tight compartments and see in them only the group characteristics, forgetting the fact that not only are there other more numerous individual characteristics but that even those that mark them as belonging to a certain group may, and usually do, vary with each one of the members, we begin to deal with shadows and abstractions rather than with live human beings.

The appreciation of this danger led a number of investigators to seek for a solution of the problem. It is obvious that the attempts of some of these to do away with classification altogether could not be successful, for even if it were possible to carry on scientific investigations without some form of classification, we cannot ignore the fact that group characteristics do exist and attract our attention regardless of our attitude. The only remaining alternative, then, is to steer a middle course between the two extremes, that is, to accept common factors as they occur but, in each individual case, to appreciate the features that are peculiarly its own. This would necessitate the introduction of some method of differentiation between psychopathological phenomena that are peculiar to some special reaction type, regardless of the person in whom they are observed, and those that result from the person's adjustment to this reaction.

The attempts of Bleuler¹⁸ to differentiate between *primary* and *secondary* or accessory symptoms would serve as an example of this method of approach. The primary symptoms are phenomena which characterize the reactions of all the members of a certain group or disease entity. Their nature is a general one and does not deal with specific occurrences in any given case. Added to these, different individuals may develop accessory symptoms which are dependent upon the particular way in which these individuals deal with their primary symptoms. Thus in schizophrenia, or dementia praecox, he recognizes the "disorders of affectivity (the tendency of the feelings to work independently of each other) and the disorders in association (the lack of connection by a final aim)" as the primary symptoms. In contrast to these, the delusions, some hallucinations, mannerisms, stereotypes, etc., are considered by him as accessory superimpositions on the primary ones in the process of the adjustment of the particular individual to them. Whether we wish to follow Bleuler further along the line of considering the primary symptoms as organic and the accessory as psychogenic is a question which need not deter us here. The important point is that he makes the attempt to steer away from rigid, iron-clad classification in which a certain fixed number of phe-

nomena are utilized as characterizing the reactions of a given group of mentally diseased patients without leaving any room for variations depending upon special types of personality structure.

Fundamental Disturbance

With Bleuler's idea as a guide in the right direction, and in an attempt to steer clear of the difficulties encountered in its application, a number of authors, notably Berze,⁹ Birnbaum,¹⁰ Küppers,⁶¹ and others, have introduced the concept of the "fundamental disturbance." By this one implies that in each case of mental disease we deal with a number of psychopathological phenomena which are the expression of that particular person's method of adjustment to a certain situation. In addition to this, however, and usually under the cover of these phenomena, we find certain features more general in character and fundamental in nature which are characteristic not only of this person but of all patients suffering from a given disease process. Thus in his analysis of the psychology of schizophrenia Berze speaks of an "insufficiency of psychic activity" as the fundamental disturbance of this disease. In an attempt to broaden this concept so as to include other mental diseases, Birnbaum has advanced the differentiation between "pathogenetic" (fundamental) and "pathoplastic" (accessory) factors. Finally, Küppers finds these primary factors in disturbances of certain components of the personality.

To be of practical value such an attempt would have to fulfill a number of prerequisites. In the first place one would have to show that such fundamental disturbances do exist, that they are definable, that they are of a general nature as far as the members of a certain group are concerned but specific to that particular group, and that they can be found not only in one disease but in all the disease entities that we encounter in the field of psychopathology. In the second place we will have to show that the accessory or superimposed phenomena observed in different members of a given group can be understood in terms of individual variations arising out of a given common basis. Finally, if this approach is to be used in the establish-

ment of some form of psychopathological synthesis, it will have to prove its practical usefulness in addition to its theoretical plausibility. The value of synthesis, as we pointed out above, depends primarily upon its usefulness in affording better and easier methods of approach to the investigation of the problems at hand. In clinical psychiatry the classification described in the last chapter is undoubtedly of such value, for in synthesizing the different types of symptoms into such disease entities we gain a great deal of help in the psychiatric approach of the disease, that is to say, in treatment and management. A form of synthesis which would be of equal value to the psychopathologist would, therefore, also have to be of definite help in pursuing the main goal which we recognize as belonging to psychopathology. In our introductory chapters we have attempted to show that the psychopathologist is interested in the phenomena of abnormal mental activity from the point of view that they are manifestations of certain types of adjustment. The fundamental disturbances, therefore, that are to serve as a nucleus for such a synthesis should represent not only primary factors in certain forms of psychopathological reactions, but should also bear fundamental relationship to the dynamics of the adjustment of the person. With these considerations in mind we now wish to present an outline of such a form of synthesis on the basis of the personality structure as it was discussed in Chapter XXIV. Here, too, it must be understood that the outline is mainly to serve as a guide to those who wish to attempt an independent approach, rather than a final statement concerning psychopathological reaction types.

Synthesis on the Basis of Personality Structure

In our discussion of the structure of personality we have come to see that the different forms of mental activity, normal or abnormal, when looked at from the point of view of the adjustment of the whole personality to given situations, can be ranged along certain primary personality components, or, as we expressed it, certain fundamental needs in adjustment. We saw that in the human being the mental activities can be classified

according to their being manifestations of three fundamental adjustment patterns; namely, ratiocination, growth, and self-assertion. We have also come to appreciate that normal adjustment depends upon a certain balanced relationship between these three needs and the different states of tension that exist between them. It is logical, therefore, to consider the primary effects of the determinants of abnormal adjustment as manifested in disturbances either in any one of these three components or in the relationships between them. Actually, it is possible to recognize, in the majority of psychopathological pictures as we see them in persons with mental diseases, disturbances that are closely related to these three structures of personality, and with these as "fundamental disturbances" we wish to present in the following chapters an analysis of the different psychopathological reaction types.

In the outline of personality structure we saw that these three patterns may be regarded as the mainsprings of mental activity in general, each one of them representing certain methods of adjustment in the form of primary needs which the individual expresses in his behavior or experience. It was also found that in this process the influences of each one of these methods can at no time occur independently of the others. We saw, for instance, that an act primarily conditioned by the need of self-assertion will have to be in certain accord with the conditions of accretion and ratiocination before it can be brought to its accomplishment. Similarly an urge primarily emanating from the need of accretion will have to be, on the one hand, acceptable in terms of logical ratiocination, and, on the other, not altogether in opposition to the interests of self-assertion. Finally, activities that are mainly determined by ratiocination run their course in relation to a background furnished by influences emanating from the needs of self-assertion and accretion, which must be taken into consideration. In order, therefore, that a normal form of adjustment should be attained, none of the three should be in extreme opposition to the interests of the other two. If, for some reason, these relationships are disturbed, we will have a disturbance in the normal adjustment and the occurrence of a psychopathological reaction.

Such disturbances may consist in either an increase or decrease of the influence of any one of the three structures or in faulty relationships between them. We can, therefore, approach the attempt at synthesis of psychopathological reaction types on the basis of disturbances in the influences which each one of these three patterns of adjustment exerts upon the personality, either by virtue of changes within any one of them or by virtue of disturbed relationships between the three.

Before taking up the discussion of these reaction types, reference must be made to some points that should be borne in mind in the practical application of this grouping. The first is that one should not confuse the problem under consideration here with that of etiology. When we speak, for instance, of a certain group of psychopathological phenomena as developing on the basis of a disturbed relationship between personality structures, we do not imply that these phenomena are *caused* by this particular disturbance, but that, whatever the cause is, its primary effects are manifested in this disturbance. The second point is that psychopathological pictures as we see them in actual mental disease do not necessarily have to be the expression of only one of these reaction types. In fact, most usually we deal with combinations of two or more of these types, or with transitional stages from the one to the other.

Finally, we must emphasize the dynamic nature of this type of "fundamental disturbance." In the theories advanced by the above-mentioned authors there still remains a tendency to regard psychopathological reactions as essentially *symptom complexes*. It is true that some of the symptoms may be regarded by them as primary, fundamental, or specific in contrast to secondary or accessory, but they nevertheless retain the characteristic of phenomena peculiar to all the symptoms of a given reaction. But the concept of "fundamental disturbance," by definition, must imply something essentially different. A "symptom" always remains a manifestation or expression of an underlying disturbance, and no matter how specific or pathognomonic it may be, it cannot at the same time coincide with that disturbance itself. It is in this sense, for instance, that in internal medicine we speak of inflammation as a funda-

mental disturbance and such phenomena as changes in the blood, swelling, infiltration, fever, etc., as symptoms. Dynamically, the fundamental disturbance occupies a place between the causative factor and the symptoms in such a way that the etiologic agent causes a disturbance which is then manifested in certain symptoms.

With these considerations in mind we can recognize certain types of psychopathological reactions, each one characterized by the disturbance in the functions of one of the three components of personality structure associated with an imbalance between it and the others. In addition to this, we may have reactions in which the functions of two or more of these components are disturbed.

Chapter XXVII

PSYCHOPATHOLOGICAL REACTIONS WITH A DISTURBANCE IN THE FUNCTIONS OF RATIOCINATION

THE PHENOMENA or symptoms observed in reactions of this type are expressions of a disturbed relationship between the control exercised by ratiocination and the urges emanating from the other two components. As was emphasized above, ratiocination deals with the appreciation of relationships of contents either within the individual himself or outside of him, or between the individual as a whole and the outside as an environment. Any urge towards an act of behavior or towards the consummation of an experience, no matter what its source, will be subjected to the process of ratiocination to determine whether, in view of existing circumstances, it is logically permissible. It is true, of course, that a large number of the phenomena of normal mental activity contains certain factors which are not altogether logically related to conditions as they exist, and they are accepted by ratiocination as a result of a compromise, wherein the desired activity is somewhat modified to suit the occasion, but is not altogether given up because of the remaining unacceptable features. In other words, in order to assure a normal type of adjustment, the need for rational approval will have to sacrifice some of its prerequisites. This compromise, however, can only be accomplished where ratiocinative functions are not too strongly opposed to the type of activity that is conditioned by the urges from within. Where logical considerations do not sanction the compromise, either because the inhibitory powers of ratiocination have, in themselves, been strengthened by special factors, or because the urges emanating from within the individual are totally or pre-

dominantly unacceptable to logical thinking, these urges will then be blocked and prevented from reaching their objectives. Under such conditions, psychopathological forms of reaction may result, in view of the fact that the interference with the original form of expression may lead to the search for an abnormal outlet. We can conceive of different types of such outlets under different conditions, provided, of course, the repressing force of the ratiocinative functions are not weakened to permit a frank outbreak against it.

(1) The first type of such a reaction would present itself in the form of the continued existence of this urge as a free, ungratified force within the individual. Under such conditions the person will be aware simply of a tension or discomfort within him, the abnormal nature of which he can appreciate, but does not know the causes and cannot find any satisfactory outlet. The most frequently occurring phenomena of this type are the undifferentiated states of anxiety, fatigue, restlessness, feelings of inadequacy, etc., that are encountered in a large number of mentally abnormal persons. Since the condition develops on the basis of the fact that the urge which is represented in this freely floating energy is one whose gratification is not permissible in view of existing circumstances, there will be not only an interference with the expression of it, but the very appreciation of the original objective will be forced out of the field of ratiocination. The individual will, therefore, be unable to know the exact nature of the content he desires, and, in consequence, it will be difficult not only for the person himself, but also for the outside observer, to appreciate the cause of such a state. The psychoanalytic method of investigation has proved itself a distinct help in obtaining these mechanisms by temporarily weakening the repressing force of ratiocination and allowing the patient to become aware of the actual contents involved. It is on this basis that, in some of the cases, we come to appreciate what has caused the development of the vague state of tension that is presented. Thus, for instance, it was found that one of the most frequent causes of such a tension is that of the frustration of the sexual urges. Persons who have continued to gratify their sexual instinct by masturbation

are prone to develop states of anxiety if these methods of gratification are suddenly repressed because they are not acceptable to the ratiocinative appreciation of the situation. Similar states of anxiety are also produced in other forms of frustration such as inadequate or incomplete sexual gratification, total abstinence, and so on. Masturbation itself is, of course, an inadequate form of gratification of the sex instinct and, even if continued, will only gratify certain aspects of the sexual need, and thus may lead to the development of vague feelings of restlessness, fatigue, and a sense of inadequacy.

(2) The second type of abnormal outlets has already been suggested in the discussion of the psychoanalytic theory. When a primary fundamental urge is repressed in view of its being unacceptable to the logical appreciation of relationships and, furthermore, if the simple states of anxiety, restlessness or tension do not in themselves succeed in affording expression to the ungratified desire, then an outlet must be sought which, although permitting a certain type of gratification, will be disguised in such a fashion that it can be accepted by ratiocination. To the soldier in the trenches, for instance, who is faced with danger to his life and wants to retreat in the face of that danger, but at the same time is forced by considerations of ratiocination to hold to his established standards of loyalty, this tendency, primarily emanating from self-preservation, may be expressed in anxiety, but if this is not an adequate release he may resort to a substitute reaction, satisfactory to ratiocination, which may in part gratify his real desire. Thus, for instance, he may develop a severe tremor which will render him incapable of performing his duties as a soldier. This will allow his removal to a hospital away from the danger that he has to face, and yet he will not be called upon to admit that the primary reason for his retreat is a fear of danger. Here, instead of having a simple state of tension as expressive of repression, he will develop what we might consider as a *substitute* reaction.

These substitute reactions are numerous in form and rather complex in the nature of their development. We ask primarily why it is that under the same conditions one soldier will develop hysterical blindness, another a paralysis of an arm, a

third tremors, and so on. In some cases it is found that the nature of the substitute reaction may be predominantly determined in an apparently accidental fashion. Thus a soldier, fighting beside a man who was blinded by a wound and removed from the trenches for this reason, may be strongly influenced toward this same reaction as a method of gratification of the self-preservation instinct. Whether this suggestion in itself can actually produce such a symptom (and here we are not speaking of the frank cases of lying or simulation) is a question that cannot be easily answered. Our understanding of the reasons behind the *choice* of substitute phenomena has been furthered immensely by the psychoanalytic studies of cases of this type. We have already referred to the possible mechanisms of such choice in our discussion of the *fixation point*. There we saw that if an individual in his previous life has developed a certain method of gratification of a given fundamental urge, which at that time was quite acceptable by ratiocination but which in later life has become less acceptable, the ground will be prepared for a possible substitute mechanism. For if at a later time the person meets obstacles in the form of unfavorable conditions for the gratification of this urge, and if he has to repress this particular gratification, he will naturally fall back upon a method which at one time in his life has been considered acceptable. A large number of the cases of continued masturbation in adult life are found to occur on that basis. Thus if a person who has grown to maturity and whose sexual urge should be gratified in a heterosexual fashion finds that existing conditions prevent him from gaining gratification in the usual way, he may fall back on that method which has been utilized during his earlier life.

We can see that such a condition may give rise to a more complicated picture in which the fact that this method of gratification is not altogether satisfactory will result in a feeling of tension superimposed on the continuation of the old method. We may thus have a state of anxiety added to the substituted reaction. This again does not exhaust the possibilities of the effects of fixation points in the production of certain types of psychopathological reactions, for we can readily see that given

a strong fixation, it will not only offer itself as a possible substitute in the face of unfavorable conditions but may also, in itself, be one of the reasons for the inability to adjust to more mature methods. If the person has been conditioned for a long time in his early life to gratify a certain form of craving by a given method, and if this fixation has been very strong, he will have the tendency to fall back on it at the slightest provocation in the presence of even minor obstacles which, had there been no earlier fixation, would not have been considered hard to overcome. We must remember, too, that these fixation points gain strength by repetition in a fashion not unlike that observed in the development of conditioned reflexes. The more frequently a fixation point is resorted to as a refuge, the stronger the tendency to reach out for it in face of more or less difficult situations. Finally, it may establish itself as the method of choice even if no difficulties other than very ordinary ones are present. It must also be remembered that in the life of an individual several types of experiences may have occurred, conditioning a series of fixation points so that when the person finds it necessary to search for a substitute reaction he may utilize several of them in a composite manner or continue in his search from one fixation point to another, depending upon the difficulties which he encounters in carrying out the activities of any one of them. The possibilities in this field can probably best be appreciated when we examine an actual case of this type.⁷⁸

The patient, a white American, married man, age 34, came to the hospital with an advanced case of torticollis (wry-neck). This condition had continued for several months in spite of intensive physiotherapeutic treatment. The symptom was not the first manifestation of nervous disease in this patient. About ten years before, while in the army, he suffered another "nervous breakdown" which consisted of feelings of inadequacy, fatigue, vague pains and aches in his body, and a state of continuous anxiety. In an analysis of this case, the following facts came to the surface. The patient and a sister one year his junior were the only children in a home environment marked by economic difficulties, a strict, selfish father, and a neurotic mother. The family history showed a definite tendency toward poor adjust-

ment in the form of reactions similar in nature to those shown by the patient. Physically he had always been healthy but all through his life he had shown a pronounced lack of initiative and was shy and bashful. In his early childhood he had manifested a marked attachment to and dependence on the mother, an attitude which was readily encouraged by the mother who found in it a compensation for an unhappy marital life. From the very beginning this attachment to the mother was frowned upon by the harsh and unsympathetic father who, on several occasions, actually punished the child for being "mother's baby." Frustrated in this attempt to seek affection, the child turned toward the little sister. It so happened that the latter was very much like her father in that she was strong-willed and independent, but at the same time was very much attached to the brother, and gave him the sympathy and protection that he failed to get from the father and was prevented from getting from the mother. She died at the age of five, and the patient, now left to himself, in searching for a substitute for the sister developed a pronounced attachment to a girl in the neighborhood, one year his senior. The new playmate was rather precocious and introduced the patient to a number of premature sexual practices which consisted of a mixture of childish attempts at coitus and mutual masturbation. Shortly after the beginning of this acquaintanceship the patient was rather abruptly replaced in the affections of this new friend by an older boy who came into the neighborhood. The patient attempted some resistance but was overpowered by the older boy in a fashion not unlike the way his father treated him, and the boy, left alone once more, withdrew into himself, gratifying his longings for the little girl by masturbation during which he imagined himself playing with the girl. Discovered in the practice of this habit by some of the older boys, he was told that it would be followed by physical and mental weakness and, on one occasion, an eighteen-year-old degenerate was pointed out as an example of the result of this habit. One of the characteristics of this degenerate was a peculiar tic consisting of a twist of the neck to the right side. The patient was severely frightened by that but did not give up his practice, since for the gratification of his yearnings for the playmate he was faced with the unpleasant alternative of having to fight a losing battle against the stronger boy.

At the age of puberty an attempt to emancipate himself from this habit by the cultivation of the affection of another girl was again frustrated, and here, too, he was forced out of the field by an older boy. The patient dropped back to his habit which was the only method

of sex gratification that he could have without the fear of facing a stronger opponent. As time went on, the conflict became more accentuated, the patient's fear of the effects of the habit became more marked, but at the same time his attempts to outgrow the habit and take up heterosexual interests became less successful. When the war was declared, he enlisted, feeling that in this way he could prove to himself and to others his courage and masculine qualities. At the same time, bolstered up by his uniform and goaded on by stories of sexual adventures of friends in the army, he had started out on what appeared to be a successful courtship of another girl. However, when the time came for him to leave for France, this girl, who was not interested enough to wait for his return, became engaged to another man. The patient then attempted to forget his troubles by drinking and dissipation with his fellow soldiers, but this also ended unfortunately. The shy, bashful youngster could not get himself to enter wholeheartedly into the life of a rowdy and instead of finding a satisfactory solution for his problem, he only succeeded in establishing a reputation as a weakling and "sissy." He became still more addicted to his habit and withdrew from most camp activities, his feelings of inadequacy caused by masturbation gradually developing into an accomplished fact. Added to this was his experience after he got to France, when he was declared by the physician as unsuitable for active service because of impaired vision. This was an official stamp placed on his feelings of inferiority, and various attempts at sexual intercourse having also ended in failures, his feelings of inadequacy became further increased. It was at this time that he developed the symptoms of anxiety, fatigability and general feelings of inadequacy, which caused the patient to be placed on a so-called rest cure, having been pronounced unsuitable for service.

When he came back from France he again attempted to take up heterosexual relationships. He began courting a girl who in every respect reminded him of his little sister and the girl, who had, in his early life, been substituted for her. In this adventure he was again displaced by a more active and enterprising man, following which he was more or less passively talked into marrying the sister of this girl who was not in any respect the type of person whom he would have picked as a desirable mate. He married this girl and from the very beginning his relationships to her were unsatisfactory. A series of facts contributed to this fundamentally unhappy solution of his problems. First, his wife in early life was said to have been attacked sexually by her own father, who, as it happened, was of much the same type as

the patient's father. In his relationships to her, therefore, he always saw himself as coming out second best in a battle for possession of his mate against her own father. Secondly, the wife was of a poor constitutional makeup both physically and mentally and from the beginning had shown a pronounced sexual frigidity toward the patient with a severe manifestation of dyspareunia. The various half-hearted attempts at relations with her gradually grew less frequent and the patient again went back to his early habits of masturbation.

Shortly before the development of his wry-neck, the patient's wife became ill and in a physical examination was found to have constitutional syphilis which she had most probably acquired from her father. The fear of contracting the disease from her now added to the previous conditions that made it undesirable to have intercourse with her, and this was discontinued altogether. Since the patient was married and could see no possibility of obtaining heterosexual relations either with his wife or with other women, he was faced with the fact of going through life with the only possible gratification, that of masturbation. The early fears of mental and physical degeneration returned now, and the special fear of developing the tic which had been called to his attention as a boy was brought back by the fact that his grandfather, whom he had always known to be of a loose sexual type, had at this time developed a marked shaking of the head, probably on the basis of senile degeneration. He expected every moment to develop a similar ailment and this actually took place under rather unusual circumstances. The patient, who was working as a printer in a publishing house, one morning approached the building where he worked just as an explosion took place in it. He happened to be walking down the road with two girls that were working in the factory, and, as the explosion occurred, he caught hold of both of them and forced them to fall to the ground as he had done during the war in France. The close proximity of the girls excited him sexually and the fear of possible injury to the three of them threw him into a panic. When he got up after the explosion he found that his head was shaking vigorously and instead of attributing that to the fear reaction caused by the explosion, he immediately connected it with his masturbation. Even after the panic reaction had passed, he continued to have the tic in his head, and in attempting to counteract it he began to force his head into a position in which it was bent to the opposite shoulder. This made it impossible for him to work and as the wife at the time had recovered from her illness, she suggested that she should go out to work until his ailment had passed. He had never been particularly interested in

his work and had always wished that in some way he would get away from it. The tic and the subsequent wry-neck offered itself as a solution to most of his problems. As long as the difficulty lasted he could not go to work and therefore his wife had to provide for both of them. At the same time the necessity of holding his head in the particular position in counteracting the tendency toward the tic also reminded him constantly of the possible dangers of masturbation and actually succeeded in keeping him from continuing this method. Gradually this form of refuge from his difficulties became solidly entrenched and finally led him to seek help because of the painful contractures that had started to take place in the muscles of the neck.

We see in this case a gradual development of substitute reactions on the basis of the repression of frustrated instinctual cravings. We might say that the first fixation point in this case took place at the time when the shy and dependent boy was thrown upon the sister for protection and actually obtained it there. The following experiences with the little girl and the autistic substitution following his replacement by the older boy fixed in him a certain method of gratification of both the frank sexual cravings and the desire for protection and affection in the form of obtaining these gratifications in himself rather than in the objective world. The repetition of similar situations, each one of which reenacted more or less similar conditions that had taken place in his early life, helped to strengthen the fixation point, and in each consecutive case his reaching out for normal gratification was rendered less vigorous, and the attraction toward older methods more powerful. The feelings of inadequacy and fears of physical degeneracy, especially concentrated in the fear of the development of the tic, served to take the place of the vague tensions of an ungratified sexual instinct and all of them combined in the wry-neck to offer a solution which, although not completely satisfactory, was one that was not apparently of his own making and therefore not to be considered as unpermissible by his logical faculties.

The rich variety of possible conditioning factors furnished by accidental occurrences during the lives of different individuals offers a vast multitude of substitute phenomena that

are possible under such conditions. Thus we may find the development of different types of conversion symptoms such as paralyses, headaches, peculiar movements, blindness, fainting spells, and various others. Another series of possible outlets can be found in the obsessions and in the phobias. The search for gratification of an instinctual craving which is not permissible by the consideration of relationships in the situation, may lead the person to think of such gratifications, but because of their clash with ratiocination these thoughts may be considered as intruding themselves into his mind against his will. A woman whose husband does not adequately gratify her sexual desires will naturally wish to be rid of this husband. She may then begin to have fears of the husband being killed in some way. Every time he leaves the home, she will go through agonies of fear that he has been murdered, run over, or has met with some other type of accident. In the case presented in the introduction (v. p. 5), we have seen how a similar situation led to the development of obsessive thoughts of the patient wanting to kill her husband and child and yet considering these as being thoughts that intruded themselves upon her mind against her will. As all these phenomena are based upon a very strong influence of ratiocination we find a total preservation of the subject-object differentiation. In fact, in these cases, this differentiation far from being decreased is in many cases increased with the development of introspection, doubt, and a number of other phenomena which we have discussed under that group. The process does not always stop at the substitution stage, but may go on to the development of a break with reality. In an organism which lives under the effects of constantly changing environment and under the tension contributed by ungratified desires, for which the substitute phenomena can offer what is at best only an inadequate gratification, there may occur a stormy revolt of repressed forces against the repressing influences with a break through the bounds of ratiocination, and these ungratified desires may come to the surface in an undisguised form. A typical example of such an occurrence of a temporary nature is that of the so-called hysterical delirium.

A condition of this type was observed in a female patient who had always had a strong sexual drive, but who had grown up in an environment which frowned upon any admission of such desires. She was married to a man who was sexually inadequate and incapable of gratifying her, and in keeping with her early training she had gradually entrenched herself under the external aspect of prudishness and moral and religious fanaticism, but with a continuous state of vague restlessness and anxiety under the surface. Following a drastic change in her environment when she left home to take care of a girls' camp where she had experienced some difficulty in preventing flirtations of these girls with boys of an adjoining boys' camp, she suddenly went into an acute hysterical delirium in which she used language of a very profane type, imagined herself as being attacked sexually by numerous men, and talked in an obscene way about sexual matters.

In this case, the brief flight from reality into a situation that permitted the gratification of the repressed desires was apparently sufficient, for she recovered from this delirium and returned to her previous conservative manner of living, having developed a complete amnesia for the occurrences during the disease. Where such underlying cravings are still more repressed and therefore offer a greater incentive for breaking out against the repressing force, and at the same time no outlet is available either in the form of crusading reform activities or other substitute reactions, the break may be more severe and the return to normal less easy. Under such conditions we deal with a decreased influence of ratiocination and the development of syndromes which are dependent upon increased influences of either one or both of the other two levels. These will be discussed in the succeeding two reaction types. Before we go on to that, however, we might consider briefly the conditions that may arise because of an originally decreased influence of ratiocination as contrasted with those where the influence of ratiocination is increased.

(3) Disturbances due to decreased influence of ratiocination may be seen first of all in the condition where, congenitally or constitutionally, there is a defect in the intellectual faculties of the person. They comprise all those conditions which in psychiatry are grouped under the heading of mental

defects. Here we have an originally weakened power to determine relationships within and outside of the individual, and the influences of self-assertion and growth come to the surface even though they have not been subjected to undue pressure. A soldier who has a constitutional defect in intelligence and, consequently, has not developed any high standards of behavior, will not find the same difficulty in running away from the field of battle when his life is threatened as would a normal person. Similarly a mentally defective person under the influence of sexual stimulation will not tend to inhibit these on the basis of moral or ethical considerations to the same extent as a normal person would do. In this type of individual the sexual instinct itself need not be increased nor have been unduly repressed, but comes to the surface simply because the repressing influences are not so great as they are in normally constituted persons. In this field we also deal with cases where, even if native intelligence is not defective, faulty education and upbringing have caused a lack of development of the moral and ethical standards of the individual.

Chapter XXVIII

PSYCHOPATHOLOGICAL REACTION TYPES WITH DISTURBANCES IN THE FUNCTIONS OF ACCRETION

IN THIS chapter we wish to discuss the second group of psychopathological reaction types in which the characteristic feature is a disturbance of those mental activities which are primarily related to the personality structure which we discussed under the term of accretion. In the discussion of personality structures or adjustment patterns we have stressed the point that the most important factor introduced by the phenomenon of accretion is the element of selection. The attitude of the organism to its environment thus gains the new characteristic of what in the human being we might consider as affect or feeling, in that the environment, instead of being looked at as something homogeneous, is now dealt with as a compound of heterogeneous parts which differ from one another in their relative acceptability to the individual. It was also emphasized that this attitude of selection or affect toward the environment maintains, in the human being, a constant relationship to the other two structures. This relationship can be looked at from a point of view of energy tension in which primarily it may tend to repress certain activities which emanate from the level of self-assertion but may in itself be subject to such repression through the function of ratiocination. In other words, if the organism is subjected to an urge on the basis of its needs for self-assertion, this urge toward activity will be brought into relationship with that of selection, and if it is in opposition to it, it may not be allowed to run its complete course. Thus, for instance, we find that for the sake of procuring nutriment or gratification of the sex instinct the organism may run the risk

of endangering its self-preservation. In such a condition there will be a conflict between the desire to retreat in the face of the danger on the one hand and the tendency to reach out for the food or the sexual mate on the other. Under normal conditions a certain state of balance is established wherein the degree of danger to self-preservation will be measured against the degree of necessity for nutriment or the obtaining of sexual gratification, and the stronger of the two will be victorious. Whether the decision is made in favor of the one or the other, one of them must be inhibited wholly or partially, and its failure to gain expression manifests itself in a state of tension against the inhibiting force.

A more or less similar situation may be found between the other two levels. Thus, for instance, a form of activity which is conditioned by the level of accretion may be such that it is quite acceptable by the individual's appreciation of the relationships of the different contents of the situation. Then it will be allowed to run its course without any interference. It may, however, clash with it, if in securing satisfaction in the present it tends to establish a disturbed relationship in the future, or if it is totally against the demands or the customs of the environment, and then it may have to be inhibited, that is to say, not allowed to go on to its completion. For the proper integration of the different activities of the individual we will need, therefore, a certain constant relationship in the degree of influence that each one of these three urges has upon the personality. We have already seen that where the influence of ratiocination is unduly increased, decreased, or otherwise disturbed, certain types of psychopathological reactions may result. A similar state of affairs will be found when the disturbance is in the field of accretion. We will first consider those disturbances that are due to a pathological increase in the influence upon the personality of urges emanating from the level of accretion.

1. *Increase in Influence of Accretion.* It is quite evident that the result of such a condition will be that both ratiocination and self-assertion will be unduly influenced and subjugated by the increased effect of the accretion urges. Activities that emanate from that level will then run their course in spite of the fact

that they may endanger the self-assertive needs of the individual or his appreciation of relationships outside. The most important feature of the level of accretion being that of selection and the decision as to the acceptability or rejectability of the outside, we will find that the increase of the influence of this level will show itself primarily in stronger affective attitudes taken by the person toward contents in the situation. The most typical and at the same time the most widely distributed form of disturbance here will be that series of phenomena which we have discussed under the disturbances in the general exchange of activities under the grouping of "disturbances in direction *outward*." (v. p. 61). These phenomena, as we have already stated, are also known as the different degrees of *extraversion*. The person here reacts in an exaggerated fashion on the basis of accepting or rejecting the contents from the outside. A stimulus that comes to the individual is primarily received in an affective fashion, and he shows a constant swing from over-elation and over-satisfaction with everything outside to that of undue depression and dissatisfaction. As this tendency increases in degree there is a proportional decrease of the influence of ratiocination and the person loses his ability to maintain a critical attitude toward the situation and to act on the basis of intellectual appreciation. He likes or dislikes things on the basis of immediate contact, without any attempt at rational probing as to whether these likes or dislikes are justified. Concomitant with this is a general increase in those phenomena which we have discussed under attitudes and feelings. Elation and depression, love and hatred, anger and satisfaction may change with pronounced rapidity, these fluctuations exerting a profound influence upon all activities of the person. There need not be an increase in both of these extremes, the individual sometimes showing either the increased acceptance or the increased rejection of the situation.

In a manner as these increase in intensity with the proportional decrease of the influence of the other two levels, and as these states tend to remain of long duration and of profound effect upon the personality, we may find the development of serious mental disturbances characterized either by an extraor-

dinary feeling of elation and well-being or by a profound depression. In the first case we may have concomitant features of increased activity, enterprise, talkativeness, meddlesomeness and irritability; in the other, decreased activity, apparent loss of interest in things, gloominess and hopelessness, even to the extent of the contemplation and actual carrying out of suicidal attempts. The decreased influence of ratiocination may lead quite frequently to the development of superficial and more or less temporary misinterpretations of occurrences outside, for as the actual relationships of things in the situation are overshadowed by what is expected on the basis of the affect, the projections of these affective anticipations may develop readily into delusional and hallucinatory experiences of a superficial type. The causes and mechanisms of such an increase in the influence of the level of accretion may be manifold. The condition may be predominantly due to a constitutional predisposition which results in a personality that always tends to react in a more pronounced fashion to its affective tendencies. We speak here of the so-called *cyclothymic* makeup. In such an individual we find the concomitant tendency to inhibit the influences of the other two levels, especially that of ratiocination, because that is the one which tends to keep the affect in check. As these conditions are mainly due to constitutional predisposition and exert their influence upon the personality throughout the life of the individual, they are designated in the psychiatric classification as "psychopathies."

A typical example of this form of disturbance can be seen in the following case: a single, white male, 22 years of age, who was brought to the clinic with the complaint of "nervousness." This consisted of feelings of inferiority and inadequacy, an attitude of hopelessness, decreased activity and initiative. These symptoms came on gradually following an altercation between the patient and his older brother, which resulted in the patient's being reprimanded and slapped by the brother. In the history we find that several members of the paternal side of the family suffered from affective disturbances; others were of a temperamental makeup, stubborn and high-tempered. The patient himself has always shown a tendency toward mood spells, swinging from states of gloominess and feelings of inadequacy to elation,

hyperactivity and boastfulness. He has always been superficially a good mixer but has never formed any deep and lasting attachments. In his attitude toward people and enterprises he has invariably shown the tendency to become easily interested and enthusiastic at first, but just as readily to turn toward anything new that happened to attract his attention. At the age of eighteen, while away from home, he became interested in pharmacy. He threw himself into the work with a great deal of enthusiasm, but soon tired of it, and when reproved for the poor work he was doing he went into a state of mild depression, refused to do any of the work, stating that he "was no good anyway" and that "it was no use even trying," and he came home. When he came back home and was offered some work in his brother's office, he quickly changed to the other extreme, began to talk about the changes he would make in the office, and became meddlesome and officious. Since then he has changed his work on numerous occasions and with that has also vacillated in his mood from elation to depression. Throughout this period he has shown a variety of attitudes to things in general. At times he would be full of plans for activities, varying from religious reforms to political and social reorganization. At other times he would express feelings of inadequacy and hopelessness.

His feelings of depression when he came to the hospital did not last very long. Following some encouraging remarks by the physicians who interviewed him, he soon began to brighten up and in a few days swung around to the other extreme. He became boastful and domineering, began to make plans for a "new start," this time along artistic lines. He actually succeeded in drawing a few mediocre portraits, which he immediately proclaimed as masterpieces, began to make elaborate plans for further training in painting and when he left the hospital he was in an elated and exuberant mood.

At no time during these changes in mood did he reach the extreme of bizarre behavior, which would make it impossible for him to remain outside of an institution. On the other hand, his rapid changes from one state of affect to the other made it impossible for him to adjust to any situation satisfactorily. Intellectually he was above average, and physically he presented a typical pyknotic picture.

In this case we find first of all an hereditary trend toward cyclothymic types of reaction, and the patient himself has shown all through his life the predominant influence of these character traits. The tendencies emanating from the level of accretion, showing themselves in exaggerated affective attitudes toward

situations, have periodically tended to overshadow the functions of ratiocination with the resulting failure in adjustment.

These conditions may, however, take on more serious dimensions and cause a profound disturbance in the person's adjustment in the nature of a severe mental disease. Here we deal with more or less acute attacks of depression or elation that may last for months or years. In some of these cases we can find a certain relationship between various factors in the situation and the occurrence of the disease. We deal here first with the occurrences of events that would, even in normal persons, produce a pronounced change in *mood*. The loss of a beloved person, for instance, may affect the individual to such an extent that, at the moment, he may lose interest in everything else, assume the attitude that life has nothing more to offer him, and develop a temporary depression. If this depression lasts longer and is of a more profound nature than usual we speak of it as a *reactive* depression. A similar situation can be found in cases of elation, although these are not quite so frequent. Disturbances in the functions of those parts of the organism that are particularly associated with growth, such as the endocrine glands, may also give rise to an increased influence of accretion and this may bring about a disturbance of this type. Another series of possible causes in the development of these reactions was indicated in the last chapter. If for some reason the affective tendencies of the individual have to be repressed by ratiocination and this repression repeated on numerous occasions, the repressed contents may gain in strength and then break through to the surface against the repressing forces and in this revolt assume the upper hand, producing an elation or depression of pathological extent. Cases of mental disease illustrative of this form of psychopathological reaction are most frequently encountered in the *manic-depressive* psychoses.

It must be borne in mind that, in describing these psychopathological reactions, we are interested primarily in the establishment of reaction types rather than disease entities. Cases of mental disease are never, or at least very rarely, purely representative of these psychopathological reactions, for the complexity of causative factors and mechanisms of development,

as well as the types of personality with which we are dealing, will introduce features that are psychopathologically to be regarded as belonging to other types. Thus we may find in certain cases of mental disease, where the controlling feature is that of an increase of the influence of accretion upon the personality, a superimposition of certain phenomena that are dependent upon increases of influence of self-assertion or of ratiocination. Although in some of these cases we may find that the starting point of the development of the disease was conditioned by a certain occurrence in the life of the person that served to depress or exhilarate him, this is by no means always so. In the majority of cases it is very difficult and sometimes impossible to appreciate why the person should have reacted in this way or in such a pronounced degree. Here, as in the other reactions, we find that the causes are to be looked for in the constitutional, developmental and situational factors and even then we may, in some cases, be unable to see clearly through the mechanisms and etiology. The picture presented by this form of psychopathological reaction and the manner in which it develops is illustrated in the following cases:

The first case is that of a forty-year-old, married, white male, who came into the hospital because of an acute excitement that had developed about ten days before his admission. During this excited state he had been over-active, had spoken of being a reformer, whose mission in life was to combat the general economic depression in the country. He withdrew the small amount of money that he had in the bank, bought a large quantity of bread, and started handing this out to passersby on the street. He had also gone down to his church where he mounted the pulpit and talked in a loud and voluble manner of the brotherhood of men, of how much he himself loved everybody and that he knew that at heart everybody cared for his fellow-beings, that he had plans for the prevention of all kinds of social and political turmoils, the abolition of wars and revolutions. In the picture he presented in the hospital he was very much excited, talked incessantly and volubly about his plans for helping his fellow-citizens, spoke about his love for everyone, proclaimed himself a second Christ, and announced that he was going to make everyone rich and happy. He was over-active, argumentative, could not be made to listen to any reasoning concerning his condition, paced about the ward meddling into

everybody's affairs, trying to be helpful but actually interfering with the duties of the physicians and nurses on the ward. With this he was quite irritable, haughty, had an exaggerated notion of his physical and mental abilities and spoke in glowing terms of his feeling of happiness.

The family history could not be obtained here as the man was an immigrant, and none of his friends knew very much concerning his relatives. The patient himself seemed to have been of a definitely extraverted makeup. The informants described him as quick in his reactions, inclined to "flare up" suddenly, and to cool off just as quickly, a good mixer and a person who tended to react in an exaggerated fashion to successes and failures, but was predominantly an optimist. About twelve years before the onset of the present illness he had an attack of mental disease characterized by a depression of mood and decreased activity. At that time he had been drafted into the army and shortly after joining the camp he began to show signs of excitement and elation, had to be confined to the hospital, and it was there that he went over into a depression. Following his discharge from the army he had undertaken numerous ventures of different types but had never actually succeeded in adjusting in any of them. Following each one of the failures he would become discouraged, would talk about being a failure in life, and never being able to amount to anything, but after a while would conceive of some new idea and get immersed again in this new venture. On such occasions his zeal in the new enterprise would completely override his judgment, causing a decrease in his efficiency and frequently leading to failure. Shortly before the present illness, a relative of his who was rather prominent in political affairs of the state had secured a civil service appointment for him. The position secured was not a particularly important one, but from the very beginning the patient, who had always shown a tendency toward exaggerated reactions to any ventures, had taken the same attitude to this appointment. He immediately began to make plans for reforms in his department as well as in the departments of the state government in general, was hypercritical toward the other workers, and commenced to talk about rather complicated plans of reorganization, all of which succeeded in getting him into difficulties and made it doubtful whether he would hold this position. It was in reaction to this situation that when the difficulties in the department began to increase because of the economic depression, he started to talk about general reforms, not only in his department and in his state, but in the country in general, and rapidly developed the acute excitement with which he came to the hospital.

As opposed to this pronounced elation and increased acceptability of contents in the situation, we find at the opposite pole the cases of depression. As illustrative of that we have the following case: ⁶⁹

A white American man, age twenty-six, single, who came into the hospital because of a marked depression in which he had made several attempts to commit suicide. In this person's family we find a series of mental diseases, several of which were of the same type of psychosis as that of the patient. His father and two uncles committed suicide in attacks of depression. The parents separated when the patient was very young and he has always shown a pronounced attachment to the mother. The mother's subsequent marriage to a man whom the patient considered unworthy gave rise to the development of a marked dislike and contempt for the step-father. From the very early days of the patient's life he has shown a definite tendency toward increased affective reactions to situations, consisting of both depressions and elations. Most of the time, however, he was serious-minded and quiet although he was energetic and had a successful career at school and college, excelling especially in athletics. He was very sensitive about his occasional failures and would always react in an exaggerated fashion to them. Sexually he showed a precocious and strong drive with marked sadistic tendencies. At about the age of twenty he began to show definite spells of exhilaration and depression alternating with one another. During his elations he would become particularly enterprising, would start in planning for things which he actually had no abilities to carry out, and as he was disappointed by not getting the things he was reaching out for, he would go into profound depressions, considering himself inadequate and inferior and actually under-estimating himself just as he would over-estimate himself during the attacks of elation. His present illness was brought on following his failure to succeed in an attempt to obtain a higher degree at one of the large universities. He had started working on a thesis which was far beyond his powers and had dealt with it in a manner which was really inferior to what he might have done. This was mainly because he had started on this thesis during a spell of excitement, and his judgment and intellectual abilities in general were overshadowed by his optimistic and hopeful attitude. The failure to obtain his goal immediately threw him into another spell of excitement.

In this case the effects of reacting to situations under an exaggerated influence of the affect is particularly well illustrated,

and we also see here the vicious circle that may be established in this type of personality. The natural tendency toward exaggerated acceptance and rejection of contents outside makes the person react to minor successes with a state of pronounced elation and acceptance which afterwards colors everything else around him and makes him reach out for things which he could not possibly obtain. The inability to obtain the goal is further increased by the fact that, during the elation, the affect is allowed to influence the judgment unduly and there is less chance to reach the goal than there would be otherwise. With the failure which is, of course, to be expected, there is a swing in the opposite direction and in the subsequent depression the person shows the opposite pole of under-estimation of his own abilities as well as the acceptability of things outside and the feeling of inferiority, inadequacy and hopelessness. As the effects of the depression begin to wear off, the person begins to realize that he has been under-estimating himself, is both surprised and encouraged by the ease with which he seems to be able to do things that looked so difficult before, and thus the ground is prepared for another rise in the exaggerated elation and the new cycle begins.

It must be remembered that this clearly related succession of alternating elations and depressions is not a particularly common occurrence in this type of disease. In the first place, in a large number of cases the attacks are limited to one phase. Thus we find that a patient may have only attacks of excitement, whereas the depressions, if they occur at all, are of such a minor degree that they are not noticeable either to the patient himself or to outsiders. Secondly, it must be emphasized again that the causes, either of the disease process as a whole, or of the precipitation of any single attack, are not clearly evident in most cases. In our discussion of the phylogenetic determinants it was pointed out that there appears to be a particularly close relationship between this form of disease and constitutional predispositions in the form of pyknotic-cyclothymic (extraverted) makeup. But even this does not hold true invariably, for we find reactions of this type occurring in persons of athletic and even leptosome (physical) and schizoid (mental) characteristics.

Within recent years it has been pointed out, especially by the psychoanalytic group, that ontogenetic factors play a much more important rôle in the causation of these disease processes than has been hitherto suspected. In a number of cases where, superficially, there seemed to be no adequate cause of the disease, a detailed analysis of the life of the patient led to the discovery of certain experiences which seemed to be the conditioning factors of the reaction, and the patients improved or were cured following such analytic procedures. In such cases it was felt that the most important factor in the etiology consisted of the development, on the basis of these experiences, of feelings of *guilt* and *inadequacy* in relation to the sexual life and a subsequent depression developed on the basis of these. An illustration of this form of reaction can be seen in the following case:

A single, white, American woman, twenty-eight years of age, was brought to the hospital because of an attack of depression which came on about five months before, and during which she had made two attempts at suicide. She stated that her feeling of sadness was due to a fear of having been infected with syphilis and to a sense of guilt and inadequacy. Physically she was of a definitely pyknotic makeup, there were no signs of any organic disease, and the tests for syphilis were all negative. In her previous life she had had another attack at the age of eighteen similar to the present one. She could give no reason for her feelings of depression or guilt and knew of no way she could have contracted the syphilitic infection.

In an analysis of the case the following points came to light: her family history showed instances of depressions on both the paternal and maternal sides. She herself had always been of a shy, sensitive makeup with a tendency to look at the dark side of things. Although superficially prudish with men she had from her earliest years been conscious of a strong interest in sexual matters. From the age of six until the onset of her first mental illness at the age of eighteen, she had been subjected to a number of experiences which resulted in associating sex gratification with pronounced fear of physical pain and ideas of sinfulness. The first of these took place at the age of six when an older girl introduced her into the practice of masturbation, using for this a sharp implement which hurt her a great deal. Later she was impressed with the sinfulness of this practice and its dire effects. On

several occasions after that she had similar experiences with boys, during one of which her hymen was ruptured, this being accompanied by severe pain. The onset of menstruation which occurred shortly after this incident was taken by the patient as a sign of punishment and permanent injury. It was at this time, too, that while at school her attention was called to a boy who was said to have had a syphilitic infection, which, she was told, he contracted because of sexual indulgences. The thought then came to her that she must have this disease also, because of her sexual experiences. The habit of masturbation was quite strongly rooted in her by this time, and as she was afraid of having any contact with boys she continued it as a form of gratification of her strong sexual feelings. On several subsequent occasions she had resisted attempted sexual approaches by men, but just before the onset of her first attack of depression she allowed an older man, to whom she had developed a strong attachment, to manipulate her genitalia and produce a strong feeling of sexual gratification. His attempt to carry out sex relations caused a pronounced reaction of fear and she escaped to her room in a state of panic, with the fear that she might have become pregnant. When subsequent developments failed to substantiate the fear of pregnancy, she began to be worried about the possibility of a syphilitic infection superimposed on the feeling of guilt. This gradually developed into a deep depression which lasted for several months.

Her recovery from this attack took place about the time she developed a strong attachment to a young woman somewhat older than herself. This woman had strong homosexual tendencies and the patient's attachment to her gradually took on sexual characteristics. The two began to indulge in homosexual practices, chiefly consisting in mutual masturbation. This affair lasted for about three years, during which the two girls, both of them taking a course in nurses training, lived together. There seemed to be no conflicts on this basis, at least as far as the patient herself was aware. At the end of the course the two separated without any special disturbances on the part of the patient beyond a mild feeling of depression. The patient then returned to her practice of masturbation with occasional feelings of guilt and inadequacy which were not strong enough to interfere with her adjustment. Shortly before the onset of the present attack she came home and invited her friend to visit her. They resumed their homosexual relations, but here, on the basis of the earlier experiences, the patient began to worry about the sinfulness of these practices, and one night following excessive indulgence she developed an acute panic reaction

and a return of her fears of syphilitic infection. This was further accentuated by the fact that shortly afterward the patient's sister-in-law discovered the two friends in the act of mutual masturbation. She began to brood over the affair and worry about possible exposure and the consequences. At this time her father, to whom she had always been very much attached, became sick with pneumonia and died shortly afterward. In her depression and self-depreciation she began to accuse herself of having been the cause of the father's illness, being convinced that his death was not due to pneumonia but to syphilis which he must have contracted from her. The depression became more pronounced and her subsequent attempt at suicide brought her to the hospital.

In this case, then, we find a certain type of constitutional makeup which served as a predisposing factor in the development of the depression. To this was added a long series of experiences which conditioned a pathological attitude toward her sex life. A conflict resulted which was accentuated by the patient's strong sexual drive, and, when the compensatory expressions of her affective needs were rendered impossible, she developed the depression.

Other factors have been found to contribute in the causation of these reactions. One of the most important is the disturbance of the function of the glands of internal secretion, especially the gonads. This is observed particularly often in women. Even in normal persons one quite frequently notices minor affective disturbances in relation to the various phases of the menstrual cycle. In some cases definite depressions and, more rarely, excitements occur at these periods. We also find this type of mental disease developing during pregnancy and following delivery. It is true that in these cases we are also apt to find definite constitutional factors and experiences in early life that must be regarded as contributing their share in the etiology of the disease. Nevertheless they, in themselves, are not sufficient to cause the actual breakdown, as is evident from the fact that in certain patients several repeated attacks may occur in relation to the birth of children, the patient remaining quite well in the intervals. In some cases these factors serve not only as contributory etiologic agents, but also seem to lend a certain

distinctive aspect to the reaction. This is seen, for instance, in the depressions that develop in both men and women at the involutional period. Here we find that in addition to the depression as such, we have pronounced restlessness, apprehension and delusional ideas, especially of a self-derogatory type. Another common feature here is the frequently occurring delusional reference to somatic disease. These patients often have the most bizarre ideas that their internal organs have been destroyed, snakes and other animals having taken their place, etc.

Of the large variety of phenomena that may be observed in these cases in addition to the disturbances in affect or attitude, we wish to emphasize a few of the others that are most closely related to the level of accretion. We have already mentioned the disturbances in general activity, especially those of general motility and speech, with an exaggeration in the cases of elation and a decrease in depression. Reference has also been made to the feelings of guilt and self-depreciation in the depressed person, and those of grandeur in the elated states. Another important feature is the disturbance in the sexual activities of the patient. Accompanying or even preceding the manifestations of elation we find an increase in the sexual drive of the patient. Sometimes this phenomenon is the first to attract attention to the faulty adjustment of the individual. The sexual urges, expressive as they are of the pattern of accretion, share in the general increase of the acceptability of environmental factors and force their way to the surface even when they run counter to the person's logical appreciations. One can see particularly well here the manifestation of the increased influence of the urges emanating from the level of accretion and the more or less complete disregard of the functions of ratiocination. In the depressions where the general attitude is that of dissatisfaction, there is also a pronounced decrease in the sexual activities. The condition is not that of a loss of interest, as will be seen in the reactions to be discussed in the next chapter, but a feeling of futility and inadequacy in the ability to reach that which actually may be very much desired. The feelings of guilt and self-depreciation paralyze the person's tendencies to reach out for

the objects which he desires but considers beyond his reach.

(2) In contrast to the psychopathological reactions considered above we have those that represent the expressions of a decreased influence of the affective components. These show themselves mainly in constitutional predispositions toward poverty of affective expression. These persons are cold and reserved, they are intensely intellectual or self-centered depending upon which one of the other two levels gains the upper hand in expression. On such occasions we find that the controlling feature is represented by activities which necessarily are related to relatively increased function of either one or both of the other two levels and therefore should really be discussed under those two.

Chapter XXIX

REACTION TYPES CHARACTERIZED BY DISTURBANCES IN THE FUNCTIONS OF SELF-ASSERTION

IN THIS chapter we wish to discuss those forms of psychopathological reaction which are characterized by disturbances in the function of self-assertion, leading to an undue influence of the self-assertive tendencies with a proportional displacement of the influences of the other two levels. In the discussion of the structures of personality, or as we designated them, the patterns of adjustment, we saw that the characteristic feature of the self-assertive tendencies is that of a certain attitude towards the outside. We saw there that, whereas at the level of ratiocination all of the contents within and outside of the personality are logically arranged in their proper relationships in time, space, causality and so on, and at the level of accretion all are similarly arranged according to their values of acceptability or non-acceptability, at the self-assertive level there is the tendency to deal with the environment in an undifferentiated manner, keeping the same attitude toward all of it, rather than exercising any tendency toward selection or differentiation. Where the self-assertive tendency expresses itself in *self-preservation*, the attitude of the individual is primarily that of an unqualified passive resistance to all contents outside himself as a defense against their attempts to destroy his individuality. Similarly, in its manifestation in the form of *self-extension* there is an undifferentiated attitude toward all contents outside and inside the individual, that of an aggressive attack upon them in his attempt to occupy as much space as possible. In other words we find here an attitude which is essentially concerned with the individual himself and his own existence either in time or in

space without any primary interest in anything outside of him unless these things outside prevent the individual from expressing this particular tendency.

In the normal individual where there is more or less of an equilibrium between these three patterns, we find that this intensely selfish or, as the psychoanalytic theory would designate it, narcissistic tendency is kept in constant check by the other two patterns of adjustment. On the basis of selection at the level of accretion the individual becomes capable of permitting substances from the outside to be incorporated within him even though this means a change in his individuality, and, therefore, is opposed to his purely self-preservative tendencies. Sacrifice and surrender become possible on that basis. These tendencies are even more radically and effectively checked by considerations of ratiocination. The person represses almost constantly urges that come either from the self-preservative or aggressive trends within him on the basis of the consideration of possible relationships either at the time or in the future. It is on the basis of such effective checking of the self-assertive level that the individual becomes capable of giving as well as taking, of endangering his life either in the interests of accretion or in the interests of some idea, of giving up certain desires that he wants to have gratified at that moment for the reason of possible danger to the personality which may develop later or for the sake of procuring still greater gratification some time in the future. If, however, for one reason or another, the self-assertive tendencies gain strength and break through the repressing forces of either one or both of the above levels the adjustment of the individual will necessarily be rendered abnormal because of the lack of the usual control of such tendencies by the other two levels.

The nature and significance of such a reaction can be appreciated best if we approach it from a developmental point of view. We have suggested that genetically we can consider the self-assertive level as the most primitive, that of accretion as the next in development, and the one of ratiocination as the most highly differentiated, and both phylogenetically and ontogenetically a more recent acquisition in the structure of the hu-

man being. We have also come to regard, especially in the light of the psychoanalytic theory, the ascendancy of either one of the lower two levels over the third as a sign of regression. By that is meant that the pattern of ratiocination should be the controlling feature in the adjustment of human beings, and if either one of the other two displaces ratiocination, in that respect the resulting form of adjustment may be considered as a reversion to phylogenetically and ontogenetically older states. In the natural sciences, too, we find an analogy to this principle in the fact that inorganic matter is considered as being of a lower and more primitive level than that of organic, and that in the organic world plant life is considered as more primitive than that of the animal kingdom.

Actually we find, as has been outlined in the psychoanalytic theory, that the narcissistic tendencies of the individual represent the predominant features in adjustment in the early stages of his development. Following that, we come to the stage where the affective tendencies predominate and the individual lives according to the pleasure-pain principle, not having as yet developed the ability to probe reality and arrange his activities on the basis of logical considerations, this latter coming only with maturation. Regression should not, however, be looked at in the light of the individual's complete return to an existence of a more primitive type. In mental disease, where an individual has at one time reached a level in which all three coöperate in a more or less equal manner, the regression can manifest itself only in a certain degree of loss of the control asserted by the upper levels, the lower trends thus coming to the surface relatively unhampered by repression. At the same time, he will retain a certain number of activities which emanate from the upper levels, and in his regression he will have to adjust himself not only on the basis of the level to which he has regressed but also in consideration of a modified form of activity emanating from the upper levels. It is because of this that the psychopathological reactions that develop on the basis of a regression to the self-assertive level cannot be considered as being actually the same as those of an infantile type. In the behavior of such a person the self-assertive tendencies will predominate, of

course, but this predominance will be modified by the cropping up of more or less successful attempts at control by the upper two levels. The actual form which the pathological adjustment will take will depend, therefore, first upon the particular component of self-assertion that will predominate, that is to say, whether it will be the primarily resistive self-preservative tendency or the aggressive self-extension tendency. In addition to this it will also be determined by the type and amount of activities that have been preserved from the wreckage of the upper two levels.

The etiological factors that determine such an occurrence are numerous and variable. Usually one finds a multitude of causes, all of which converge on this form of reaction, rather than a simple manner of development and a single causative factor. The determinants of the development of such a fault in adjustment may come from different sources. First of all we have to consider the constitutional predispositions. We have already spoken of these in our discussion of the effects of constitutional factors. We saw there that by virtue of constitution some people may tend to be ego-centric, with their interests mainly turned into themselves. This tendency, which is usually spoken of as *introversion*, may show itself either in the form of a passive resistance to the outside, the main interests of the individual being centered on his own inner experiences and contents, and where no attempt is made to force these on the outside; or it may be of the aggressive type, where the individual, because of certain considerations within himself, revolts against the environment, even at the risk of endangering the continuation of his own existence, and on the basis of a destructive attitude against the world as a whole, attempts to secure supreme power over his environment.

The degree of interference which these forms of reaction will cause in the adjustment of the individual will depend primarily upon how much of the functions of accretion and ratiocination are still preserved. Thus, given an aggressive type of self-assertive personality, but where there is a preservation of intellectual abilities, the individual will be able to check occasionally these self-assertive tendencies in view of unfavorable conditions

outside himself. Even under such conditions we find that, if this self-assertive tendency continues to predominate, the purpose of the person's activities will ultimately be defeated. In a similar fashion we find that, where the more passive self-preservation aspects of the level of self-assertion control the picture, the person's tendencies to fantasy and autistic thought may be checked by his intellectual appreciation of relationships and thus be saved from a complete break with reality. In the end, however, we find in both cases an adjustment which is essentially different from that of the normal person, and, measured by conventional standards, of an inadequate form.

In most of these cases we find a predominance of constitutional characteristics as the fundamental etiologic factor, although where a detailed analysis is undertaken, one can usually find situational and ontogenetic factors contributing to the development of such reactions. Not all persons of this type need necessarily be considered as inferior to the normal, although they are outside of the normal limits. Aggressive, despotic, and self-centered persons who tend to ride rough-shod over their environment may develop into leaders of men, as in the case of Napoleon, whereas the passive autistic type is found among the great idealistic philosophers, artists, poets, etc. In the majority of cases, however, where the intellectual and other functions are not sufficient to compensate for the other abnormalities in the person's makeup we find serious interferences in adjustment and we speak of them as *psychopaths*. The field of psychopathology abounds in cases illustrative of these forms of reaction. An example of the first is found in the following case:

A white, American man, aged forty-one, was sent to the hospital because of a series of altercations with the town officials. In his family history we found a number of instances of alcoholism, shiftlessness, and other types of poor adjustment. The patient himself is of an asthenic physical makeup, self-centered, argumentative and hypersensitive. Although of a high normal intelligence, he has never been able to adjust himself adequately to any form of occupation. He has always been a poor mixer, made few friends, was hypercritical and fault-finding. Most of the positions that he had been able to secure were held for only a short while, not because of inefficiency, but because he

could not endure being under orders. He finally became a public burden and had to be supported by the community. Here he decided that the supervisors of the charitable institutions were not conducting things in the right way. He commenced to argue with them, had several serious quarrels, and finally ended by breaking the windows and furniture in the supervisors' office. It was for this that he was sent to the hospital. The most distinctive feature of his personality was the complete lack of ability to see the other person's point of view. He developed a one-sided communistic theory consisting mainly of the principle that the world owed him support and that he should not be made to reciprocate by paying in terms of services to other people. Added to this were a marked sensitiveness to criticism, an impulsive hot-headed temperament, and an exaggerated sense of his own importance.

It is in this field that we find the litigious cranks, the cold, despotic autists, crusading, fanatical reformers and hosts of others. Similar to these in self-centeredness but lacking initiative and the tendency to force the environment to their own point of view are the representatives of the second group. A good example of this type of person is found in the case quoted in Chapter XVI, in the section on "Exaggeration of the Subject-object Differentiation" (v. p. 231). Superficially lazy and disinterested, they may go on weaving dreams of high achievements within their own minds but are incapable of expressing them to the outside or of bringing them to actual accomplishments.

In a manner as the intellectual and affective interests suffer because of the increased predominance of self-assertive tendencies, we will have different degrees of severity of interference with adjustment and, in the more serious types of such cases, we will find serious mental diseases. The causative factors of such diseases must be looked for in other fields besides the constitutional. First among these may be the fixation of the individual upon some phase of his early developmental life which is still at the self-assertive level. Whether these develop primarily along the lines outlined in the psychoanalytic theory under the concept of fixation points, or are brought about by early conditioning in a manner described in the discussion of the condi-

tioned reflex theory, the important thing is that the individual holds to a certain method of adjustment, and whenever in the future obstacles are offered to his adjustment along mature lines, he will drop back to the manner of adjustment determined by that fixation point. The regression to such a point can also be conceived as being determined by factors which interfere with the proper activity of the upper two levels. Thus we find, for instance, this type of reaction in persons where certain organic diseases have affected pathologically those organs that are most closely associated with the activities of the upper two levels. We find conditions of this type developing in association with the syphilitic or other infectious diseases of the brain, or the actions of toxic agents, such as alcohol, morphine, and so on. With the waning of the power of control by the intellectual faculties there will be a proportional increase of influence exerted by the more primitive level of self-assertion.

Similar situations may be found where the affective components are interfered with in the same manner. We may also find that an undue influence of the upper two levels in repressing the self-assertive tendencies, if of long duration, and with no proper outlet for them, may lead to a revolt by the latter against the former and a temporary or permanent overpowering of the upper two levels by the lower. Usually it is found that diseases of this type develop on the basis of a complexity of causes rather than the effects of any special one of these factors. And so we find that in the psychopathological picture characterized by a predominance of self-assertive tendencies, constitutional, ontogenetic and situational factors combine to give rise to this disease, although some of them may play a greater role than the others.

In the development of such a form of reaction, we will quite frequently find a series of stages. The regression of the individual to a more primitive form of reaction may occur suddenly, at least as far as one can see from the outside, but more usually it occurs gradually, even though the steps that are taken during that process may not all be superficially apparent. Then, too, when the regression has been accomplished, we may find that, in view of the fact that certain of the activities conditioned by

the upper levels are still preserved, a new form of adjustment will be undertaken and the person will then come out of his complete regression and assume an adjustment in which all of these coöperate in producing the picture. The progress of a condition of this type can be best followed on the basis of an illustrative case.⁷²

A single man, aged twenty-seven, was brought into the hospital because of complaints that he felt he was gradually wasting away and was going to die. He described this sense of impending death as mainly affecting his "feelings." He was losing his interest in people and things about him, food did not seem to have any taste, things outside of him did not seem to be real—at least they seemed to have no interest for him. In the history we find that this patient has always been of a rather peculiar makeup; he was shy and shut-in, preferring to stay by himself rather than go out with friends. To his parents and siblings he was cold and disinterested, at the same time living by himself, day-dreaming a good deal, and going through a number of imaginary experiences. The gap that had gradually developed between himself and his parents resulted finally in open conflict, following which he left his home permanently. He went to work as a cook, at which he worked until shortly before admission. In his sexual life he had not been able to emancipate himself from masturbation until late adolescence, when, having more or less appreciated intellectually that this was not the proper method of sexual adjustment, he attempted several short-lived heterosexual attachments. His associations with women, however, were always of short duration. He would invariably leave the particular girl in whom he was interested because he thought that she became too exacting and wanted to "tie him up to her." During his last adventure he felt that the girl made him "weak sexually." On several occasions he attempted sexual intercourse but was unable to accomplish the act. He felt himself growing weaker and actually lost some weight. To counteract this he attempted various forms of physical culture, but this proved unsuccessful and a similar failure was experienced during a short period of heterosexual intercourse with prostitutes. He reverted to masturbation and soon developed the idea that people thought he looked weak and "like a fairy, his nose was drawn out, cheeks sunken in," and so on. Numerous other hypochondriacal symptoms developed and gradually led up to a feeling of wasting away and dying which brought him into the hospital.

In the hospital he became gradually worse and the condition finally

culminated in a state of acute excitement followed by stupor. During this period he was totally unapproachable. He would lie in bed, refuse to take food which had to be given to him through a stomach tube, and would lie in the same position for hours at a stretch without moving. When his arms or legs were placed in a certain position he would keep them there without any attempt to return them to a more comfortable position. With this there was a marked resistiveness to attempts to move him. Whenever such attempts were made, the muscle systems involved would become rigid, but once the change was forcibly performed he would just as strongly resist a return to the previous posture. During this time he was mute, did not seem conscious of what was going on about him, would not carry out commands; in other words, he presented a picture of complete introversion without any interests in or contact with the outside. At a later date, when he had recovered from this stage of his disease, he stated that during it he was going through various fantasies in which he felt himself living in a different kind of world, in which he was in a state of constant happiness without having to reach out for anything outside himself. His recovery from this, according to his statement, was brought about by a group of "telepathists" whose leader he associated at times with his father, at others with one of the hospital supervisors. They began to send messages just about the time of the excited period. At first they were strict with him and accused him of perverse "homosexual acts," but gradually they became more lenient in their attitude, finally informing him that they were planning to take him out of the hospital and that there were very important missions waiting for him. Gradually he began to take more interest in the outside. He started looking after his own needs, became more coöperative, but showed rather childish methods of planning for the future. He knew that he was a person of great importance, that he was going to become a leader of mankind, although he was not quite sure what the work would be or how he would perform it. During this period he was actively hallucinated. He heard people talking to him and telling him about the wonderful things he was going to do. Gradually, however, the hallucinations began to disappear, to leave behind a feeling that these experiences endowed him with powers that he did not have before the psychosis. He felt that he had the ability of visualizing things that are not actually objective, an ability that other people did not seem to possess. He stated, for instance, that, "I can think of a house in the country with beautiful gardens, and as I think of this I can see it before my eyes." The descriptions of these pictures were vivid. He

felt that they were very closely related to the powers that were given him by the mental telepathists, and his hopes for adjustment outside were closely associated with this remarkable ability.

In this case we find a typical example of the different stages of this type of disease process. Constitutionally endowed with a tendency toward introversion and an interest in contents within himself, markedly in excess of interest in things outside himself, he went through a series of experiences in his early life that, on the one hand, increased his tendencies toward self-centeredness and, on the other, made it more difficult for him to adjust himself to his environment. His failure to emancipate himself from forms of sexual adjustment that were characterized by interest in himself, and the inability to force these self-assertive tendencies into the conventional forms of adjustment, were reinforced by the actual conflicts he had to face, and caused him to retreat toward early methods of adaptation. In a manner as he withdrew his remaining interests from the outside, he began to feel that he was gradually being severed from the outside world, as was evident by his complaints that he was growing weaker, losing his feelings, etc. He ended this stage of regression by assuming an existence which was primarily self-assertive, and which lasted through his acute catatonic state at the hospital. His mutism and resistiveness were indicative of a total supersedence of self-assertive, resistive tendencies over considerations of ratiocination or affective contact with the outside. But with all that, he still remained a human being who had at one time, although inadequately, attempted to reach a certain stage of maturity. Throughout even the acute stage there still remained appreciation of certain relationships with the outside, he still possessed the representatives of adult perceptions and intellectual appreciations of what was going on around him, which made possible the comprehension of the fact that a total severance from the outside would interfere not only with his relations to the outside, but also with his ability to preserve himself.

His coming out of the acute state of resistiveness and mutism was indicative of his attempt to integrate these rather weakened remains of ratiocination and accretion with the strongly pre-

dominant self-assertive tendencies. The first to come to the surface was a reorganization of his aggressive tendencies by trying to develop the semblance of a logical system in his attempt to gain the power over the world outside. But this world outside was populated with beings who had to be molded according to his needs so as to assure his self-preservation and aggressive self-extension. Thus within his own mind he began to weave a system rather loosely connected and of an immature form of judgment and thought, in which a compromise was gained on the basis of the fact that there actually existed people outside, whose main interest in life was to grant to him those wishes which came from his self-assertive urges. In a manner as he began to weave a bridge across the gap between him and the outside world, he gradually gave up some of the more infantile forms of adjustment, but did so only because the newly-formed trends were in accord with what he wanted; that is to say, to remain inactive and as he was during the period of mutism, while at the same time, by virtue of the powers given him by these benevolent people outside, he would be able to control the destinies of mankind and exert power over them.

In the process of regression to more or less completely predominant self-assertive tendencies and then again in the process of readjustment to new conditions, such a patient may come to a standstill at any one of the given stages and remain there more or less permanently fixed. The determination as to what stage the person will finally accept as his permanent adjustment depends upon how strong the tendencies of the self-assertive level are, as well as the tolerance of conditions outside. We will thus have a series of different pictures in this form of psychopathological reaction. The person may remain for a longer or shorter period of time fixed upon that state of complete resistiveness which in psychiatric terminology is referred to as *catatonia*. Some cases have been known to remain in that state for very long periods of time, sometimes permanently. If the succeeding state of childish magic level is adhered to then we may have the condition described as *hebephrenia*, whereas if the person succeeds in passing this and fixing his state of adjustment along the lines of a readjustment to the outside world, then we have a

paranoid delusional condition. It is not in all cases that we can see these stages in their successive development. Sometimes some or most of the stages take place in such an imperceptible fashion that they cannot be recognized either by the observer or by the patient himself, and then we find that the different forms of this type of psychopathological reaction develop more or less spontaneously and the person goes on in it without any apparent tendencies of passing into other stages.

Chapter XXX

COMPLEX AND TRANSITIONAL REACTION TYPES

The Relationship between Etiology and Fundamental Disturbance

IF THE student should now attempt to apply the principles outlined in the last four chapters in his practical work with mental diseases, he may experience certain difficulties in seeing a clear-cut relationship between the actual psychopathological pictures and the reaction types discussed. Some of these difficulties are undoubtedly due to real discrepancies, the nature of which will be discussed in this chapter. In addition to these, however, there may be some that are only apparent and can be cleared up by a proper appreciation of the nature of these reaction types. In the first place it is very important to remember that this method of approach does not concern itself with an enumeration of the sum total of symptoms presented in a given case and an attempt to place all of them under the heading of some known disease entity, but concentrates on the reaction as a whole and the predominant fundamental disturbance underlying the phenomena manifested. When we consider the fact that the mentally diseased person is a complex organism all of whose reactions are not entirely dependent upon that particular fundamental disturbance, we can readily see that in any given case there will be a certain number of phenomena that do not fit into a certain reaction type.

Another factor of importance is the specific relationship that exists between certain etiologic agents and the reaction types. If, for instance, a person of pyknotic (physical) and cyclothymic (mental) makeup, in whose family history there are

numerous instances of manic-depressive psychoses and who in his childhood was conditioned to exaggerated mood swings, should find himself in a particularly depressing situation in reaction to which he develops a mental disease, it is easy to see how he will respond with a fundamental disturbance of the type described in Chapter XXVIII. Such uniform constellations, however, are seldom if ever encountered. Any one of the above-mentioned etiologic factors may be missing in a given case and instead of it we may find factors that tend to cause a different form of reaction. Under such conditions we will find that the phenomena observed will be the expressions not only of one but of two or more fundamental disturbances. At best one might find that in some cases most of the etiologic factors point towards a special type of disturbance, thus giving rise to the predominance of a certain type of reaction. To this group belong the cases that have been used as examples in the preceding chapters, although even then we find in the background certain phenomena that are not expressive of the disturbance that controls the picture.

In view of these possibilities it will be well to remember that, unlike certain forms of classification, this method of approach does not permit clear-cut grouping with definite lines of demarcation. In certain selected cases we may find such a pronounced preponderance of phenomena expressive of special forms of disturbances that we can speak of them as representatives of their respective reaction types. In between these, however, we will find others in which heterogeneous etiologic factors are so harmoniously blended that the resultant manifestations represent a combination of two or more types. Since our main objective is to understand these patients rather than the grouping of them, this lack of homogeneity instead of confusing the issues will actually give us an opportunity to investigate further the specific relationships that may exist between certain etiologic factors and the disturbances that they cause. For, given two patients, one of whom presents a picture predominately expressive of one particular type of reaction, whereas the other shows a mixture of two types and at the same time also shows a difference in some of the causative factors, it will be logical

to search for a relationship between the heterogeneity of phenomena and that of etiology. The lack of homogeneity in a psychopathological picture may express itself either in the form of the coëxistence of phenomena belonging to two or more reaction types or in transitions from one to the other during the course of the process. The first may be designated as *complex*, the second as *transitional* types.

Complex Reaction Types

The nature of the problems presented by this group is illustrated in the following cases:

Case I. A white American, single, male, age 22, who was brought to the hospital because for a period of time he had shown lack of interest in his work, expressed feelings of sadness and hopelessness, and spoke of his fellow-workers "ganging up" on him, spreading rumors concerning his character, playing tricks on him, and refusing to associate with him. His history shows no significant features in his family background. He had always been a shy, reserved, and awkward child, sensitive to the opinions of others, resenting any kind of criticism, but reticent in his expression of this resentment. His intellectual development was retarded, and at the present time he shows an intelligence quotient of 65. Because of that he had been kept back at school on several occasions and only reached the second year of high school at the age of 18, quitting after several unsuccessful attempts for promotion. In his relationship to his fellow-beings he showed a pronounced aversion for reaching out to make contacts, but had a lively imagination and a tendency toward day-dreaming in which he always pictured himself as a leader among his fellows and attractive to the opposite sex. His inability to make contacts prevented him from having any normal gratification of his sexual desires. At the same time, however, he had always vaguely hinted at various imaginary conquests and the power that he exercised over girls. All this was done in a rather primitive and childish fashion, and it was not difficult for his more intelligent acquaintances to see through the fabrications and ridicule him, especially concerning his inability to make sexual contacts. A short-lived affair with a girl of his own age, which ended in his own breaking of the association on the basis of his feeling of inferiority in that line, resulted in a period of depression which was characterized by feelings of guilt and unworthiness and pronounced

sensitivity as to what the others would say if they found out the real reason for the unhappy conclusion of this affair. He came out of this depression but following that left home in search of better conditions in other communities.

Shortly before the onset of the present illness he had obtained work in one of the C.C.C. camps, and although he was, from the very beginning, marked as somewhat queer and below par intellectually, he nevertheless attempted in his usual manner to make his fellow working men believe that he actually possessed abilities above those they could see in him. He made vague allusions to the fact that he was building a special type of radio, that he and his father were very important persons in their community and on intimate terms with persons of note. When his awkwardness and shyness with girls became evident he began to tell the people that he was engaged to be married and that the marriage was to take place on a certain date. As the time approached for this event he began to show signs of uneasiness and suspiciousness, began to talk about the other fellows in the camp passing remarks about him, regarding him as inferior to them, maligning his character and playing tricks on him. In his attempts furthermore to establish the reputation of a good fellow he started to act in an artificial, sophisticated manner, began to drink heavily, and when under the influence of alcohol would brag and boast about the things he could do along various lines. In order to impress his acquaintances with the actuality of the fictitious marriage he applied for leave of absence covering the day of this event. On the date when he was to leave the camp, and possibly for the purpose of establishing some reason for his going home, he injured himself by cutting his foot with an ax during his work in the camp. The "accident" was so poorly carried out that most of the people realized that it must have been premeditated. He obtained his leave of absence, went home, but upon his return he showed the symptoms which brought him to the hospital. He refused to talk to anyone, stayed in his room most of his free time, sulking and hinting vaguely at suicide. As the symptoms of depression became more marked and his expression of delusional beliefs concerning his fellow working men more intense he was finally brought into the hospital for treatment. The clinical picture that he presented upon examination was that of a definite depression with feelings of hopelessness and inadequacy. This, however, was very definitely colored by distinct delusions concerning plans that were being made against him by the other people, all of them expressed in a rather naïve and childish fashion.

On the surface this form of reaction would seem to be controlled primarily by the depressed attitude toward himself as well as his environment. The significance of this form of reaction was further emphasized by the fact that a similar type of reaction had occurred on a previous occasion. One could, therefore, see in this an expression of a fundamental disturbance at the level of accretion characterized mainly by the special form of attitude taken by this person towards the situation. A further analysis of the case, however, showed that his delusional beliefs concerning persecutions and references made by his acquaintances were just as prominent as the depression, and it was difficult to say which one of the two was the more important feature in the disease. This second component of the picture, however, could be seen to be very definitely related to his earlier traits of hypersensitiveness, reticence, and a tendency toward introspection. It was the pronounced ability or tendency toward cutting himself away from his environment and indulging in dreams and fantasies of his own that was at the basis of this second component, and consequently here we would think of the fundamental disturbance being conditioned by trends of a self-assertive nature. Finally, superimposed on the whole picture and coloring it to a marked extent, was the initial low intelligence which played an important role in conditioning the lack of criticism and foresight in his method of adjustment. We can see, therefore, in this case a complex psychopathological reaction resulting from an interaction of a decreased function of ratiocination and an increased force with which self-assertive as well as affective components came to the surface.

Case II. A white, married man, 32 years old, who was admitted to the hospital because of an attempt at suicide following a severe depression. The history in the case showed the occurrence of manic-depressive psychosis in the family. In his early history he showed a rather promiscuous sexual life since the age of sixteen with the contraction of a venereal disease and a continuance of promiscuity following his marriage at the age of 23. With that ever since the age of puberty there has been a pronounced addiction to the use of alcohol which has become worse after the marriage. Numerous quarrels have resulted between him and his wife on the basis both of the drinking

and unfaithfulness, and shortly before the development of the depression the wife refused to have anything to do with him and left him with the threat that she was going to have him divorced. The patient went in for further alcoholic debauches and at the same time dropped his work, began to show lack of interest in things about him, spoke of his feelings of guilt and inadequacy and attempted suicide on several distinct occasions.

In the hospital he showed a rather complicated picture. He was in a deep depression with profound retardation of activities. At the same time, however, he also showed pronounced fear reactions. He stated that he knew he was going to be tortured to death; he heard people building scaffolds outside which were intended for him. Very soon after his admission he became more actively hallucinated, and the nature of his sense deceptions was of a rather mixed type. On the one hand the voices threatened him, called him vile names, accused him of various perversions. At the same time, however, he also spoke of hearing the Lord's voice telling him that he was intended for an important mission, that he would be made the ruler of mankind, that in him the destiny of the world would be determined, that he had within him the power of uplifting or destroying all of his fellow-beings. With the increasing influence of this latter trend of his hallucinations he became more active, developed definite delusional references to the patients and the staff of the hospital, became combative and difficult to manage, haughty and overbearing. In interviews with him he showed lack of insight and appreciation of his mental condition and spoke of his hallucinatory and delusional ideas in the superficial manner which is frequently found in persons with alcoholic psychoses. The mixture of these two types of reactions continued until his recovery from the acute state, at the end of which he showed a lack of concern about the whole incident and an emotional flatness of the type frequently encountered in alcoholics.

Here again the fundamental disturbances that could be seen at the basis of the disease belonged to two different types. On the one hand we have the depressed affect; on the other, the resultant of alcoholic effects upon the brain with decreased judgment and discrimination and a tendency toward hallucinations and delusions.

*Case III.*⁶⁵ A white married man, 28 years old, who was admitted to the hospital in a state of dramatic excitement in which he claimed he had made an effort to convert his fellow-beings to the true religion.

He was the sixth of eight children in a farmer's family which was free of mental disease. As a child he was physically weak, shy, seclusive, and had violent temper tantrums. He was considered as lacking in initiative and remained somewhat dependent upon his own family. Two years before the onset of the disease he married an unattractive, pugnacious woman, domineering and attempting to manage the home. The patient had a phimosis which had worried him a great deal. He was afraid to see a physician because of fear of an operation, and on several occasions tried to improve the condition by his own manipulations. Marital relations were unsatisfactory, and he had continued autoerotism after his marriage. Four weeks before admission he began to read the Bible and found a passage with reference to circumcision. He conceived the idea of performing this operation on himself and proceeded to do so. In an effort to prevent him from doing so the wife told him that this would cause impotence and actually discovered a passage in some book concerning this. This statement made a profound impression upon the patient. At first he worried over it and became depressed but very soon came out of the depression with pronounced hyperactivity, threw himself on the floor, prayed, sang, and began to preach about his being destined to be a religious leader. It was in this state that he was brought to the hospital. Here, although he continued to behave in an excited fashion and to proclaim his mission of religious reform, he also showed marked apprehension, was afraid of anybody who approached him, and spoke about the unholiness of his surroundings. The excitement continued for a few days, after which he became somewhat underactive, refused to talk about the factors that brought him into the hospital, and whenever his sexual difficulties were approached he would immediately drop back into his singsong preaching and imaginary ideas concerning his religious mission.

In this case, too, then, we find two essentially different fundamental disturbances as the basis of the picture that he presented. On the one hand, the ungratified sexual desires repressed by the conditions in his environment had found substitute expressions in his feelings of inadequacy and the intense religious interest with the ceremonial circumcision as a method of escape. On the other hand, the ideas of grandeur, of influence over others, and of his self-importance presented delusional expressions of self-assertive tendencies that came to the surface unhampered by repression from the higher levels.

The reasons for the occurrence of complex types of reaction can be clearly seen in these cases. As was mentioned above, where the main determining factors point predominantly toward one type of fundamental disturbance we will have a reaction type that is essentially homogeneous in nature. Where, however, a combination of different factors occurs, each one of which would in itself tend to condition essentially different types of psychopathological reactions, the combined resultant of these necessarily takes the form of a complex in which all of these are represented. This is not particularly limited to psychopathological reactions, for we see it frequently occurring in other types of diseases. In the field of general medicine, for instance, we are quite familiar with this differentiation between essentially pure and mixed types of pictures. Thus, for instance, we may deal in one person with essentially one type of disease. A person with pulmonary tuberculosis may go through the whole course of his disease without developing any distinct symptoms of any other form of disease. Contrasted with this we find patients in whom during the course or development of tuberculosis of the lungs we may have the development of a focus or lesion of a different type and location, such as a brain tumor, infectious disease due to some other virus, a disease of the blood vessels, and so on. A combination of tuberculosis and syphilis, of arteriosclerosis and malignant tumor, and numerous others, is not at all rare in the practice of medicine.

It is important to appreciate the fact that when a person is subjected to two distinct forms of disease at the same time the symptoms that appear to the observer may intermingle in such a way that the whole picture takes on a coloring of its own as if it were produced by one disease, the symptoms of which are neither wholly of the one type nor the other but a mixture of both. In the cases quoted above, especially in the second case, we can see very clearly the development and course of two distinct factors, the affective psychosis on the one hand and the result of alcoholic effects on the brain on the other, both mutually supplementary and coloring the symptoms that have developed on the basis of these two different factors and the whole

picture shaped by the particular personality and experiences of the person in whom it occurs.

Transitional Types

In addition to the coëxistence of two distinct fundamental disturbances giving rise to a special form of mental disease in a given person, we may have the occurrence of different types not simultaneously but at different stages of the disease. This is particularly prone to occur in persons who are subjected to determining factors of different types, not at the same time but the one succeeding the other. In conditions of this kind we can speak of transitional types, wherein we find a typical development and course of one form of disease being interrupted by the appearance of phenomena that result from the intrusion of a new series of factors that tend to produce an essentially different picture. In the course of such a development we may have a wedging in of one form of disease between two components of another, or we may have one form of disease actually replacing the other without subsequent return to the former. The following cases ⁷⁰ could be quoted in illustration of this type of reaction.

Case I. A single man, 24 years old, of American birth, who was admitted to the hospital on February 8, 1930, with the complaint that for several days he had been excited, assaultive, and unmanageable. The family history shows no psychoses but a distinct tendency toward pyknotic-cyclothymic makeup. His early history shows a leaning toward cyclothymic swings but with a strong undercurrent of feelings of inadequacy, suspiciousness, and a tendency toward compensation, especially in the field of athletics. Intellectually he was of the average type, having gotten along well in high school, but making poor grades in his attempt at a college education. He was dismissed at the end of his first semester's work. While there he began to drink and carried this on for some time after he left school, continuing it sporadically until the onset of the present illness. In the fall of 1928 he again made an effort towards a college education, but his poor grades, coupled with his drinking and other irregularities, led to his dismissal a second time. After returning home he showed signs of

depression which wore off, however, after a short time, and he appeared normal until December, 1929. At that time he began to show gradually increasing irritability and restlessness and resumed his drinking. The condition grew worse with the development of grandiose ideas, physical aggressiveness, and finally the state which caused his admission to the hospital. Physically he was of pyknotic makeup and showed a chronic tonsillar infection which, according to the history, had probably been present for several years. Mentally he presented at first a picture of a typical manic excitement. He was elated with grandiose ideas of unusual achievements in the field of athletics, aggressive, irritable, and his stream of talk showed the ramblings and associations of a manic. After a short while, however, the excitement wore off, until superficially he seemed almost normal. His productions, however, began to show bizarre qualities. He became self-accusatory, claiming that he had done a number of things for which he was to be punished. Gradually he became suspicious and fearful. He talked about signs that were being sent to him in some mysterious way by another patient (a former varsity football player). He thought that this man had some special interest in him and influenced him in a peculiar way. The self-accusatory ideas as well as the ideas of reference were expressed in a bland fashion without any adequate affect. All through this time he would sit by himself, smiling in a silly fashion or laughing without any reason. His associations during this time showed the bizarre, unintelligible characteristics of those seen in schizophrenia. This condition gradually led to a period of actual depression with ideas of guilt and inadequacy and a good deal of crying. He came out of this final stage at first somewhat perplexed but soon was able to be taken home where he has been getting along well for the last two years, showing occasionally slight swings of mood. The whole hospital residence lasted a little over three months.

In this case, too, we see the manifestations of two different types of disturbances, but they do not occur at the same time. The reaction observed at the beginning and at the end of his hospitalization represented exaggerated affect reaction of the opposite types, that is, elevation and depression. They were closely related to the cyclothymic-pyknotic component of the patient and followed the pattern of previously observed mood swings. Wedged in between these two, however, we find a form of reaction characterized by bizarre behavior, poor affect and delusional formations that are expressive of a different type of

fundamental disturbance. One is justified in searching for the reasons of such an intrusion in the early tendencies towards autistic trends, the more recent alcoholism and chronic infection.

Case II. A 39-year-old married woman who was transferred from a general hospital in the state of an agitated depression. In her family history we find that the father developed involuntional melancholia, the mother had always been hypochondriacal, and there were two instances of mood disorders. Her previous history shows that she has always been somewhat high-strung but got along well. She was married at the age of 32 to a man who was very much under the domination of his mother. This created a difficult situation for the patient, especially since she wanted to have children, and the husband, acting on the advice of his mother, was opposed to this and insisted on the use of contraceptives. As time went on she became more unhappy about this but kept her feelings to herself. Six months before her admission to the general hospital while visiting her sister, who had just undergone an appendectomy, the patient, upon seeing the amputated appendix in a glass jar, fainted and had to be taken home. Directly following that she began to complain of pains in the abdomen, chiefly localized about the gall-bladder, weakness, fatigability, etc. She was finally taken to a general hospital where a thorough physical examination failed to reveal any organic disease. She was then told to "snap out of it," that it was only "imagination," and that if she did not do so, she would probably work herself into a real mental disease. Following this she began to show agitation and fearfulness, and stated she heard people outside her door talking about her being insane. She "knew she was going to be tortured and killed" and had numerous other such ideas. In this hospital she continued for a while in this state. She stated that she heard voices telling her that she was to be tortured, that she was guilty of various crimes, that her bowels were diseased, that her husband would be killed, etc. She cried a good deal and was agitated. Nevertheless, a discussion of her problems was carried on with her, and gradually the underlying difficulty was brought out. As she began to appreciate the relationships between her symptoms and her unsatisfactory marital situation she began to show signs of improvement. A discussion with the husband and his subsequent reassurance of the patient of certain reforms in the home life contributed a great deal to the improvement. Physically she was of a pyknotic makeup and showed no signs of organic disease, and there

were no signs of the menopause. She improved after a four months' stay in the hospital and is doing well at present.

In this case the initial attempt at somatic substitution for repressed dissatisfaction with the home situation was followed by an acute stage in which autistic trends and projections controlled the picture. This type of transition is seen even more strikingly in the following case:

Case III. A 55-year-old married woman, a native of Germany. She was referred from a general hospital because of the development of an acute hallucinatory psychosis. The family history was not well known, outside of the fact that a brother had a "nervous breakdown." Her own early personality was described as high-strung, reserved, quiet, with occasional temper outbursts. Physically she was of the asthenic-athletic mixture. Nothing is known about her early sex life. She was married at the age of 22 to an older man whom she considered unworthy of her. There has never been any affection between the two, but cold reserve and occasional quarrels. Very soon after her marriage this patient began to complain of various pains and discomforts and spent most of her time until recently between going to physicians and playing the invalid at home. This condition became particularly accentuated during the menopause (three years before admission), although it still remained essentially within the limits of the same reaction type. During the last few months preceding the development of the present form of disease, the members of her family, who have hitherto been quite sympathetic, announced to her that they were through putting up with her "imaginary diseases" and that they were going to take her to a psychopathic hospital where "research is being carried on to cure people" of this type. Prior to this, however, as a last gesture she was taken to a general hospital where she was to be given a final physical examination to show her that there was nothing physically wrong. This was done and she was told that no organic disease was present. The ensuing dissatisfaction caused some sleeplessness and restlessness, and to take care of these the patient was placed on large doses of luminal. Within the next few days she became quite serene and satisfied, but began to talk about peculiar experiences. She saw pictures and heard voices which told her about her early life and her marital difficulties. It was learned afterwards that these represented actual experiences in her early and marital life which she had always kept to herself. These pictures and voices she said came from

the Director of the psychopathic hospital (whom she had never seen), who showed her these for the purpose of curing her. The subsequent course led without any interruption, and uninfluenced by attempts at treatment, to the development of a definite schizophrenic psychosis which has been present ever since. It is interesting to note here that directly following the beginning of this change she began to talk quite freely and spontaneously about all those difficulties which had probably really been instrumental in the development of her neurotic complaints, but which she had never told to anyone before.

For a number of years this patient presented a picture in which the fundamental disturbance was essentially restricted to an exaggerated repression of self-assertive and accretion trends by the controlling functions of ratiocination, and which expressed itself through substitute phenomena. The transition to the stage where the repressed urges broke through to the surface in the form of projections was conditioned by a combination of etiologic factors. The abrupt change in the attitude of her relatives supported by the dogmatic statement following her examination, the large doses of luminal and the onset of the menopause, found a suitable soil in a person who had always been of a seclusive introverted makeup, and facilitated her withdrawal from reality to find an escape in her fantasies.

The cases discussed in this chapter serve as an indication of the rich variety that one finds in psychopathological material. The student must realize that in most instances the reaction types are far from clear-cut and that each one of them presents new possibilities. The individual settings, the particular life histories and the multitude of possible combinations of etiologic factors all combine in creating new aspects in each new case that comes under our observation. It is important to appreciate this and to keep it in mind in the approach of any manifestation of abnormal behavior. For a systematic study of psychopathology it is just as important, however, to remember that running through the maze of ever-changing phenomena there are certain common features which are characteristic of abnormal adjustment as such. It may not be possible to observe them on

the surface in terms of symptoms, but on deeper analysis they will reveal themselves as the fundamental disturbances which in individual patients gain expression in the phenomena that we observe.

THE END

GLOSSARY

- A; An—A prefix denoting absence of function.
- Absence—Brief periods of unconsciousness with amnesia.
- Action currents—The electrical currents associated with protoplasmic (nerve and muscle) excitation and transmission.
- Aesthesia—The sensation of touch (sometimes applied to denote sensation in general).
- Affect (*also* mood)—The emotional attitude towards a situation or any of its components.
- Agnosia—A loss of ability to comprehend the meaning of sensory stimuli.
- Agorophobia—An unwarranted fear of entering open spaces.
- Agraphia—Loss of ability to write.
- Aichmophobia—A fear of sharp objects.
- Alexia—A defect or loss of the ability to read.
- Algesia—The sensation of pain.
- Ambivalent—Having equal power in two contrary directions.
- Amnesia—Loss of memory.
- Anaklitic—A reaction characterized by marked dependency upon others.
- Anorexia—Loss of appetite.
- Apathy—Lack of feeling or emotion.
- Aphasia—A defect or loss of speech characterized by a disturbance of symbolic formulation or expression of words.
- Aphonia—The inability to produce sounds.
- Appersonification—The complete identification of oneself with some other person.
- Apraxia—The loss of ability to perform skilled movements with any part of the body in the absence of any actual paralysis in this part.
- Astasia-abasia—A disturbance in station and in gait occurring in hysterical patients.
- Astereognosis—A disturbance of the appreciation of the shape of an object as determined by the sense of touch.
- Astrophobia—A fear of storms.
- Asymbolia—The inability to appreciate properly the symbolic meaning of stimuli.

Ataxia—Loss of power to coördinate properly.

Athetosis—An affection marked by continuous movements of the fingers or toes.

Audition colorée—A visual sensation produced by a sound.

Aura—Special phenomena that precede convulsions.

Autistic thought—A form of reasoning that does not take into consideration the restrictions of reality.

Bestiality—Sexual attraction of human beings toward animals.

Blood pressure—The force with which the blood is propelled by the heart through the arteries.

Cardiospasm—A spasm at the entrance of the esophagus into the stomach.

Cardiovascular—Pertaining to the heart and blood vessels.

Catalepsy—*See* *Flexibilitas cerea*.

Cataplexie du reveil—Psychic awakening occurring before physical awakening.

Catatonia—A psychopathological reaction occurring in schizophrenia and characterized by special forms of motor disturbances.

Child welfare—A study of the improvement of the mental and physical health in childhood.

Chorea—A nervous disease marked by involuntary and irregular jerking movements.

Chronaxy—The duration of an electrical current necessary to produce a reaction.

Claustrophobia—An unwarranted fear of closed or narrow spaces.

Climacterium—The period of life marked by the cessation of sexual functions (in the female also *menopause*).

Coitus—The act of sexual intercourse.

Coma—Loss of consciousness.

Concussion—An injury to the central nervous system associated with rupture of small blood vessels.

Conditioned reflex—A reflex act developed through a repeated combination of the effects of an indifferent stimulus and a specific one.

Confabulation—Lying.

Constitution—The native endowment of an organism.

Conversion—A physical manifestation of a psychic conflict.

Convulsion—A disturbance characterized by an attack of muscular contractions and rigidity.

Coprophagia—The tendency to ingest excreted matter.

Cyclothymia—A cyclic mental disturbance characterized by periodic mood swings.

Déjà vecu—A feeling that one has previously experienced a content which has never been encountered.

Déjà vu—A feeling that one has previously seen something which one has never encountered.

Delirium—A mental disturbance characterized by confusion, sense deceptions, and excitement.

Delusion—A false belief.

Depersonalization—A loss of the sense of reality either of oneself or of the outside.

Determinants—Causative factors.

Diagnosis—The recognition of a disease.

Dysarthria—A disturbance of speech due to lesions in the peripheral apparatus.

Dysmetria—A disturbance of the function of measuring space.

Dysparunia—Pain in sexual intercourse in females.

Dysphagia—Disturbance in swallowing.

Encephalitis—A disease due to a special type of inflammation of the brain.

Enuresis—Involuntary discharge of urine.

Epilepsy—A group of diseases characterized by periodic convulsions and loss of consciousness.

Etiology—The study of the causation of diseases.

Euphoria—An unwarranted feeling of well-being.

Extravert—A person whose activities are mainly or wholly dependent upon and directed towards the outside.

Feeble-mindedness—Congenital defect in intelligence.

Fetichism—Sexual attraction toward inanimate objects.

Flexibilitas Cereae (waxy flexibility)—A disturbance in muscular activity in which an organ or set of organs remains in a fixed position for an abnormally long time.

Free associations—Contents that are brought up in the process of psychoanalysis in relationship to a key situation and are freely related by the patient.

Frigidity—The lack of sexual response in the female.

General paresis (*also* dementia paralytica)—A mental disease caused by syphilitic lesions of the brain.

Genetics—The study of development.

Gerontophilia—Sexual attraction of young persons to older people.

Grand mal—A form of epilepsy characterized by convulsions.

Grübelsucht—A tendency toward hair-splitting.

Hallucination—A perception that is not based upon objectively observable stimuli.

Hebephrenia—A form of schizophrenia.

Hemiplegia—A paralysis of the arm and leg of the same side.

Heredity—The process of transmission of characteristics through the germ plasm.

Heterosexual—Pertaining to sexual attraction between opposite sexes.

Homosexuality—Sexual attraction toward persons of the same sex.

Hyper—A prefix denoting increased function.

Hypnosis—A state simulating sleep induced by suggestion.

Hypo—A prefix denoting decreased function.

Idiocy—The lowest form of feeble-mindedness (intelligence quotient below 25).

Idiosyncrasy—An abnormal reaction to certain substances that enter the body.

Illusion—A perception not properly based upon the stimuli.

Imbecility—An intermediary form of feeble-mindedness (intelligence quotient below 50).

Impotence—Decrease or absence of sexual activity in the male.

Incontinence—The inability to control evacuation of the urinary bladder or of the bowel.

Inflammation—A reaction set up in the organism in response to an invading injurious agent.

Intellection—The function of the appreciation of relationships of the various components in a situation.

Introvert—A person whose activities are mainly or wholly dependent upon and directed toward himself.

Involution—The period that marks the passage from middle into old age.

Kleptomania—The compulsion to steal.

Lethargy—A state simulating deep sleep.

- Macrographia—A disturbance in writing in which the letters are abnormally large.
- Macropsia—A disturbance in the visual sense characterized by an increase in the size of objects.
- Manic-depressive psychosis—A mental disease characterized by mood (affect) disturbances.
- Mannerism—Repeatedly performed grimace or gesture without apparent meaning.
- Masochism—Sexual gratification derived from being hurt by the sex object.
- Mechanisms—The causes and relationships underlying the development of mental diseases.
- Medicine—The study of the recognition, understanding, and treatment of disease.
- Mental hygiene—The science that deals with the prevention of mental disease and the furtherance of mental health.
- Micrographia—A disturbance in writing in which the letters are abnormally small.
- Micropsia—A disturbance of the visual apparatus characterized by a diminution in the size of objects.
- Moronism—The highest form of feeble-mindedness (intelligence quotient below 70).
- Mutism—Unwillingness to talk.
- Narcissism—Love of oneself.
- Narcolepsy—Attacks of abnormal sleep of short duration preceded by weakening of musculature and frequently induced by emotional states.
- Neologism—A newly coined word.
- Neurology—A branch of medicine that deals with the organic diseases of the nervous system.
- Neuropsychiatry—A branch of medicine in which neurology and psychiatry are combined.
- Nostalgia—Homesickness.
- Nyctophobia—A fear of dark places.
- Nymphomania—Increased sexual activity in the female.
- Obsession—A thought which intrudes itself upon the mind against the will of the person.
- Oculogyric crisis—Compulsive movements of the eyeballs.
- Oniomania—The compulsion to buy.

Ontogenesis—The process of development dependent upon occurrences in the life of the individual.

Oral—Pertaining to the mouth.

Osmia—The sense of smell.

Pallaesthesia—Vibratory sensation.

Par—A prefix denoting disturbed function.

Paralysis—Absence of function of the muscles of a given organ.

Paranoia—A disease characterized by the formation of systematic delusions.

Paranoid—Pertaining to paranoia.

Pareidolia—Illusions in which fantastic meaning is read into visual sensations.

Paresis—A weakness of the muscles of a given organ.

Parkinsonism—A symptom complex characterized by muscular rigidity, disturbance in coördination, and a special type of posture.

Pathology—The science having for its object the fundamental changes that take place in a disease process.

Pathophysiological—Pertaining to diseased function of the organism.

Pavor nocturnus—Nightmare.

Pedophilia—Sexual attraction in adults toward young children.

Petit mal—A form of epilepsy usually characterized by absences.

Phenomenology—The study of the components of a situation as they can be observed.

Phobia—An abnormal fear without an objectively valid basis.

Phobophobia—A fear of being afraid.

Phylogenesis—The process of development dependent upon hereditary factors.

Physiological—Pertaining to physiology.

Physiology—The science that deals with the functions of the organism.

Polygraph—An apparatus which permits simultaneous records of the pulse, blood pressure, and respiration.

Poromania (*also* wanderlust)—The compulsion to move from place to place.

Prognosis—The appreciation of the outcome of a disease.

Propulsion—A disturbance in gait in which the body is pushed ahead of the lower limbs.

Pseudologia fantastica (*also* pathological lying)—A pathological tendency to lie without any apparent reason.

Psychasthenia—A neurosis characterized by phobias and obsessions.

Psychiatry—A branch of medicine that deals with the diagnosis and treatment of mental diseases.

Psychoanalysis—A method for the treatment of certain types of mental disease.

Psychology—The science having for its object the study of human behavior and experience.

Psychoneurosis (*also* neurosis)—A mental disease in which there is no demonstrable organic pathology and no distortion of reality or intellectual deterioration.

Psychopathology—The science that deals with the recognition, description, classification, and understanding of phenomena of abnormal mental activity.

Psychopathy—A constitutional defect in one or more components of the psychic makeup other than pure intelligence.

Psychosis—A severe mental disease characterized by distortion of reality, intellectual deterioration, or both.

Pulse—The beating of the heart as it is observed in the superficial arteries.

Pyknolepsy—Attacks of abnormal sleep occurring very frequently and of short duration.

Pylorospasm—A spasm at the passage from the stomach into the small bowel.

Pyromania—The compulsion to set fires.

Reflex—An act occurring automatically, independent of volition.

Retropulsion—A disturbance in gait in which the body is bent backward and lags behind the legs.

Sadism—Sexual gratification derived from hurting the sex object.

Satyriasis—Increased sexual activity in the male.

Schizophrenia—A mental disease characterized by inadequate emotional reactions and a disturbance in the function of intellection.

Schnauz-krampf—A mannerism of the facial musculature resembling pouting.

Situation—The sum total of all the factors in a setting at a given time.

Somnambulism—Sleep-walking.

Somnolence—Sleepiness.

Sopor—A state simulating drowsiness.

Sphincter—A ring-like muscle surrounding, and able to contract or close, a natural opening or passage.

Stereotypy—Monotonous persistence in one form of activity.

Stupor—A state characterized by a pronounced decrease or absence of observable activities and of receptivity.

Symptom—An observable manifestation of a disease.

Synaesthesia—A reaction of two or more sensory functions to a single stimulus.

Synthesis—The reconstruction of a situation from its various components.

Tetraplegia—A paralysis involving all four limbs.

Torpor—A state characterized by a decrease of reception of stimuli and response to the outside.

Trauma—A wound or injury.

Vertigo—Dizziness.

BIBLIOGRAPHY

NOTE: The following publications have been arranged in alphabetical order and provided with consecutive numbers. Most of them have been directly referred to in the book, in each case the number serving to indicate the particular publication. In addition to these the bibliography contains a small number of general publications, mainly textbooks of psychiatry and abnormal psychology.

1. Abraham, K., *Selected Papers on Psychoanalysis*. London, Hogarth Press, 1927.
2. Adler, A., *The Neurotic Constitution*. New York, Moffat-Yard, 1917.
3. Adler, A., *The Practice and Theory of Individual Psychology*. New York, Harcourt-Brace, 1924.
4. Adrian, E. D., *The Basis of Sensation*. New York, Norton, 1928.
5. Adrian, E. D., *The Mechanisms of Nervous Action*. University of Philadelphia Press, 1932.
6. Allport, G. W., "What Is a Trait of Personality?" *J. Abnor. and Soc. Psychol.* 25, 1931.
7. Allport, G. W. and F. H., *The A.-S. Reaction Study*. Boston, Houghton-Mifflin, 1928.
8. Berringer, K., "Experimentelle Psychosen durch Mescaline." *Zeitsch. Gesam. Neur. u. Psychiat.* 84, 1923.
9. Berze, J., and Gruhle, H. W., *Psychologie der Schizophrenie*. Berlin, Springer, 1929.
10. Birnbaum, K., *Kriminalpsychopathologie*. Berlin, Springer, 1921.
11. Bisch, L. E., *Clinical Psychology*. Baltimore, Williams and Wilkins, 1925.
12. Bostroem, H., "Zur Frage des Schizoids." *Arch. f. Psychiat.* 77, 32, 1926.
13. Bleuler, E., "The Physiogenic and Psychogenic in Schizophrenia." *Amer. Jour. of Psychiat.* 10, 203, 1930.
14. Bleuler, E., *Text-book of Psychiatry*. New York, Macmillan, 1924.
15. Bouman, L., and A. Grunbaum, "Eine Störung der Chronognosie." *Monatsch. f. Psychiat. u. Neurol.* 73, 1, 1929.
16. Bourguignon, G., *La Chronaxie Chez L'homme*. These de Paris, 1924.

17. Cohen, M. R., and E. Nagel, *An Introduction to Logic*. New York, Harcourt-Brace, 1934.
18. Conklin, E. S., *Principles of Abnormal Psychology*. New York, Holt, 1927.
19. Draper, G., *Human Constitution: Its Significance in Medicine*. Baltimore, Williams and Wilkins, 1928.
20. Eaton, R. M., *General Logic*. New York, Scribner, 1931.
21. Emerson, H., *Alcohol, Its Effects on Man*. New York, Appleton, 1934.
22. Freud, S., *Beyond the Pleasure Principle*. New York, Boni and Liveright, 1922.
23. Freud, S., *Introductory Lectures to Psychoanalysis*. London, Allen and Unwin, 1922.
24. Freud, S., "On Narcissism, an Introduction." *Coll. Papers*, Vol. 4, 1925.
25. Freud, S., "Psychoanalytic Notes upon an Autobiographical Account of a Case of Paranoia." *Coll. Papers*, Vol. 3, 1925.
26. Freud, S., *The Ego and the Id*. London, Hogarth Press, 1927.
27. Freud, S., "The History of the Psychoanalytic Movement." *Coll. Papers*, Vol. 1, 1925.
28. Freud, S., *The Interpretation of Dreams*. New York, Macmillan, 1913.
29. Freud, S., *The Psychopathology of Everyday Life*. New York, Macmillan, 1914.
30. Gillespie, R. D., *Sleep and the Treatment of its Disorders*. London, Bailliere, 1929.
31. Goldstein, K., "Die Lokalisation in der Grosshirnrinde." *Bethe-Bergmann Handbuch*, Vol. X, 1927.
32. Goldstein, K., *Ueber Aphasie*. Zurich, Fussli, 1927.
33. Goldstein, K., "Zur Theorie der Funktion des Nervensystems." *Archiv. f. Psychiat.* 74, 1925.
34. Hart, B., *Psychopathology*. New York, Macmillan, 1927.
35. Head, H., *Aphasia and Kindred Disorders*. Cambridge Univ. Press, 1926.
36. Hellpach, W., *Die Geopsychischen Erscheinungen*. Leipzig, Engelmann, 1917.
37. Henderson, D. K., and Gillespie, R. D., *Text Book of Psychiatry*. Oxford Univ. Press, 1932, 3rd ed.
38. Herrick, C. J., *Introduction to Neurology*. Philadelphia, 1922, 3rd ed.

39. Herrick, C. J., *Neurological Foundation of Animal Behaviour*. New York, Holt, 1924.
40. Hoskins, R. G., *The Tides of Life*. New York, Norton, 1933.
41. Hull, C. P., *Hypnosis and Suggestibility*. New York, Appleton, 1933.
42. Husserl, E., *Logische Untersuchungen*. Halle, Niemeyer, 1913, 2nd ed.
43. Huntington, E., *Civilization and Climate*, Yale Univ. Press, 1924.
44. Jaensch, E. R., *Eidetic Imagery*. New York, Harcourt-Brace, 1933.
45. James, Wm., *Principles of Psychology*.
46. Jaspers, K., *Allgemeine Psychopathologie*. Berlin, Springer, 1923, 3d ed.
47. Jaspers, K., *Strindberg und Van Gogh*. Berlin, Springer, 1926, 2nd ed.
48. Janet, P. M., *L'automatisme Psychologique*. Paris, Alcan, 1889.
49. Janet, P. M., *Les Obsessions et la Psychasthénie*. Paris, Alcan, 1919.
50. Janet, P. M., *Principles of Psychotherapy*. New York, Macmillan, 1924.
51. Janet, P. M., *The Major Symptoms of Hysteria*. New York, Macmillan, 1907.
52. Jung, C. G., *Psychological Types*. New York, Harcourt-Brace, 1923.
53. Jung, C. G., *Two Essays on Analytical Psychology*. London, Baillière, 1928.
54. Kahn, E. *Psychopathic Personalities*. Yale Univ. Press, 1931.
55. Klages, L., *Handschrift und Charakter*. Leipzig, Barth, 1929.
56. Klages, L., *The Science of Character*. London, Allen and Unwin, 1929.
57. Kretschmer, E., *Medizinische Psychologie*. Leipzig Thieme, 1926, 3rd ed.
58. Kretschmer, E., *Physique and Character*. New York, Harcourt-Brace, 1925.
59. Köhler, W., *Gestalt Psychology*. New York, Liveright, 1929.
60. Kronfeld, A., *Das Wesen der Psychiatrischen Erkenntnis*. Berlin, Springer, 1920.
61. Küppers, E., "Ueber den Begriff der Grundstörung." *Arch. f. Psychiat.*, 99, 1, 1933.
62. Lashley, K. S., *Brain Mechanisms and Intelligence*. Univ. of Chicago Press, 1929.
63. Larson, J., *Lie Detecting*. Univ. of Chicago. Press, 1933.

64. Levy-Bruhl, L., *Primitive Mentality*. London, Allen and Unwin, 1923.
65. Lindemann, E., and Wm. Malamud, "Experimental Analysis of the Psychopathological Effects of Drugs." *Am. Jour. of Psychiat.* 13, 853, 1934.
66. Lindemann, E., "Experimentelle Untersuchungen über das Entstehen und Vergehen von Gestalten." *Psychol. Forsch.* 2, 1922.
67. Malamud, Wm., "Adaptation and Growth." *Mental Hygiene*, 11, 1927.
68. Malamud, Wm., "Dream Analysis." *Arch. Neurol. and Psychiat.* 31, 356, 1934.
69. Malamud, Wm., and F. E. Linder, "Dreams and Recent Impressions." *Arch. Neurol. and Psychiat.* 25, 1081, 1931.
70. Malamud, Wm., and E. Lindemann, "Dynamics of Psychiatric Reaction Type Determination." *Am. Jour. of Psychiat.* 13, 347, 1933.
71. Malamud, Wm., E. Lindemann, and H. H. Jasper, "Effect of Alcohol on Chronaxia." *Arch. Neurol. and Psychiat.* 29, 790, 1933.
72. Malamud, Wm., "Psychoanalytic Mechanisms in Clinical Psychiatry." *Am. Jour. of Psychiat.* 8, 929, 1929.
73. Malamud, Wm., "Psychogenic Motor Disturbances." *Arch. Neurol. and Psychiat.* (In Press.)
74. Malamud, Wm., and W. R. Miller, "Psychotherapy in the Schizophrenias." *Am. Jour. of Psychiat.* 11, 457, 1931.
75. Malamud, Wm., and D. Rothschild, "Some Modern Trends in Neurophysiology." *Jour. Nerv. and Ment. Dis.* 68, 1928.
76. Malamud, Wm., "The Role Played by Cutaneous Senses in Spatial Perceptions (1)." *Jour. of Nerv. and Ment. Dis.* 66, 585, 1927.
77. Malamud, Wm., and W. J. Nygard, "The Role Played by the Cutaneous Senses in Spatial Perceptions (2)." *Jour. Nerv. and Ment. Dis.* 73, 465, 1931.
78. Malamud, Wm., "The Psychotherapy of Neurasthenia." *Jour. of Iowa State Med. Ass'n.* 21, 489, 1931.
79. Malamud, Wm., "The Sense of Reality." *Archiv. Neurol. and Psychiat.* 23, 761, 1930.
80. McDougall, Wm., *An Outline of Psychology*. New York, Scribner's, 1923.
81. Meyer, A., "Objective Psychology or Psychobiology." *Ment. and Nerv. Dis. Monog.* No. 41.

82. Meyer, A. "The Complaint as the Center of Genetic Dynamic versus Nosological Teaching in Psychiatry." *New England Jour. of Med.* 199, 360, 1928.
83. Morgan, J. J. B., *The Psychology of Abnormal People*. New York, Longmans-Green, 1928.
84. Myerson, A., *Inheritance of Mental Disease*. Baltimore, Williams and Wilkins, 1925.
85. Nünberg, H., *Allgemeine Neurosenlehre*. Bern-Berlin, Huber, 1932.
86. Pavlow, I. P., *Conditioned Reflexes*. Oxford Univ. Press, 1927.
87. Pavlow, I. P., *Lectures on Conditioned Reflexes*. New York, Intern. Pub. 1928.
88. Piaget, J., *The Language and Thought of the Child*. New York, Harcourt-Brace, 1926.
89. Pintner, R., *Intelligence Testing: Methods and Results*. New York, Holt, 1931.
90. Pötzl, O., "Die Optisch Agnostischen Störungen." *Aschaffenburg Handbuch* 3, 2, No. 2.
91. Prinzhorn, H., *Bildnerei der Geisteskranken*. Berlin, Springer, 1922.
92. Rohden, Fr. V., "Konstitutionelle Körperbau Untersuchungen." *Arch. f. Psychiat.* 79, 786, 1927.
93. Rosenthal, K., "Über das Verzögerte Psychomotorische Erwachen." *Archiv. f. Psychiat.* 81, 159, 1927.
94. Schilder, P., and D. Kauders, "Hypnosis." *Nerv. and Ment. Dis. Monog.* No. 46.
95. Schilder, P., "Introduction to a Psychoanalytic Psychiatry." *Nerv. and Ment. Dis. Monog.* No. 50.
96. Schilder, P., *Medizinische Psychologie*. Berlin, Springer, 1924.
97. Schilder, P., and E. Stengel, "Schmerzasympbolie." *Zeitsch. ges. Neurol. und Psychiat.* 113, 143, 1928; also 129, 250, 1930.
98. Spearman, C., *The Abilities of Man*. London, Macmillan, 1927.
99. Spinoza, B., *Ethics*. New York, E. P. Dutton, 1916.
100. Stern, W., *Die Differentielle Psychologie*. Leipzig, Barth, 1921, 3rd ed.
101. Stern, W., *Studien zur Personwissenschaft*. Leipzig, Barth, 1930.
102. Storch, A., "The Primitive Archaic Forms of Inner Experiences." *Nerv. and Ment. Dis. Monog.* No. 36.
103. Travis, L. E., *Speech Pathology*. New York, Appleton, 1931.
104. Troemner, E., *Das Problem des Schlafes*. Wiesbaden, 1912.

454 *OUTLINES OF GENERAL PSYCHOPATHOLOGY*

105. Uexkull, J. V., *Theoretical Biology*. New York, Harcourt-Brace, 1933.
106. Vahinger, H., *The Philosophy of "as if."* New York, Harcourt-Brace, 1930.
107. Watson, J. B., *Behaviorism*. New York, Norton, 1930.
108. Wechsler, D., "The Measurement of Emotional Reactions." *Arch. Psychol.* 12, No. 76, 1925.
109. Wells, F. L., *Mental Tests in Clinical Practice*. Chicago, World Book Co., 1927.
110. Weiss, A. P., *A Theoretical Basis of Human Behaviour*. Columbus, O., Adams, 1925.
111. Weizsaecker, V. v., and J. Stein, "Der Abbau der Sensiblen funktionen." *Deut. Zeits. Nervenhe.* 99, 1927.
112. Weizsaecker, V. v., "Einleitung zur Physiologie der Sinne." *Bethe-Bergmann Handbuch*, Vol. 11, 1926.
113. Weizsaecker, V. v., "Über eine Systematische Raumsinnstörung." *Deutsch. Zeit. f. Nervenheil*, 84, 1924.
114. White, Wm. A., *Essays on Psychopathology*. Nerv. and Ment. Dis. Pub. Co., 1925.
115. White, Wm. A., "Lectures on Psychiatry." *Ment. and Nerv. Dis. Monog.* No. 51.
116. White, Wm. A., *Medical Psychology*. Nerv. and Ment. Dis. Pub. Co., 1931.
117. Zucker, K., "Experimentelles über Sinnestäuschungen." *Arch. f. Psychiat.* 83, 706, 1928.

INDEX

A

Abraham, K., 24
 Absence, 181
 Absentmindedness, 78
 Accretion, 356; decreased influence, 414; increased influence, 401
 Action currents, 251
 Adjustment, as standard of normality, 14; organization of, 353
 Adler, A., 21, 24, 303
 Affect, 358
 Agorophobia, 219
 Agitated, 66
 Agnosia, 104
 Agraphia, 143
 Aichmophobia, 219
 Alcohol, 328
 Alexia, 103
 Allergy, 156
 Allport, 271
 Als-ob, 232
 Amnesia, 112, 234; anterograde, 113; retrograde, 112
 Anaesthesia, 80
 Anaklitic, 73
 Analgesia, 80
 Anal stage, 159
 Analysis, 5
 Anorexia, 152
 Anosmia, 80
 Anticipation, 217
 Anxiety neurosis, 376
 Apalaesthesia, 80
 Apathy, 190
 Aphasia, 128; nominal, 129; semantic, 130; sensory, 103; syntactical, 129; verbal, 129
 Aphonia, 127
 Appersonification, 238, 241
 Appetite, disturbances of, 151
 Apraxia, 149
 Articulation, 129

Assimilation of food, 156
 Associations, 92; in epilepsy, 97; in general paresis, 98; in manic excitement, 94; in post-encephalitics, 101; in schizophrenia, 99, 100; Klang, 96; manic, 95; poverty of, 95; qualitative disturbances, 95; quantitative disturbances, 93
 Associative Functions, 92
 Astasia-Abasia, 140
 Astereognosis, 82
 Asthenic, 273
 Astrophobia, 219
 Asymbolia, 104
 Ataxia, 149
 Athletic, 273
 Attention, 77; direction of, 77; scope of, 77; tenacity of, 77; vigilance of, 77
 Attitude, 44, 186; ambivalent, 190; disturbances in feeble-mindedness, 193; disturbances in organic disease, 193; inadequacy of, 191; to environment, 191; to oneself, 193; to situation, 186
 Audition colorée, 81
 Aura, 123
 Autistic, 63, 237
 Automatic acts, 168
 Automatic speech, 169
 Automatic writing, 169
 Autosuggestion, 237
 Awareness, 86; qualitative disturbances, 90; quantitative disturbances, 86

B

Baumann, L., 82
 Behavior, 44, 51; definition of, 53; diminished quantity, 67; directed inward, 63; directed outward, 61; disturbance in content, 70; dis-

- turbance in direction, 60; disturbance in form, 69; disturbance in quality, 69; disturbance in quantity, 65; efficiency of, 73; exaggerated quantity, 65; general activities, 55, 59; intensity of, 73; psychopathological, 53; special activities, 54
- Behaviorism, 312
- Beringer, K., 23
- Bernheim, 21, 23
- Bernreuter, 271
- Bertrand, 21, 23
- Berze, 383
- Bestiality, 160
- Binet-Simon, 114
- Biology, 25
- Birnbaum, K., 383
- Bleuler, 21, 77, 382
- Blocking, 95
- Blood pressure, 249
- Blushing, 250
- Body-mind problem, 323
- Braid, 21, 23
- Broca, 23
- C
- Cardiospasm, 154
- Cardiovascular, 249
- Cataplexie du reveil, 178
- Catatonia, 122, 425
- Categories, 52
- Causality, 89; disturbance in appreciation, 90
- Causes, acquired, 262; constitutional, 262; environmental, 262; explanatory, 258; understandable, 258
- Censure, 298
- Cerea Flexibilitas (see waxy flexibility), 122
- Character, 345
- Charcot, 21, 23, 282
- Chemical agents, effects of, 330
- Child Welfare, 30
- Chronaxy, 252
- Chronognosis, 83, 213
- Chronology, 82
- Chronometry, 82
- Circumstantiality, 130
- Classification, methods of, 367; psychiatric, 370
- Coma, 77, 88, 176
- Communication, 130; qualitative disturbances, 131; quantitative disturbances, 130
- Complaint, 34
- Complex acts, 162
- Comprehension, 109; in feeble-mindedness, 110; in organic disease, 110; in senile deterioration, 110
- Compulsive acts, 163
- Compulsive crying, 148
- Compulsive laughter, 148
- Concomitants, of behavior and experience, 13, 45, 52, 247
- Concussion, 327
- Conditioned reflexes, 306; in psychopathology, 23
- Confabulation, 131
- Conscious, representatives, 340; the, 339
- Consciousness, 86
- Constitution, 264; manic-depressive, 278; neurotic, 278; special characteristics, 277; traumatic, 327
- Contact, 72
- Conversion, hysterical, 234
- Convulsion, 122; clonic phase, 123; hysterical, 123; tonic phase, 123
- Convulsive states, 68
- Coördination, disturbances in, 137
- Coprophagia, 154
- Cosmic influences, 321
- Cyclothymia, 403
- Cyclothymic, 373
- D
- Dancing, 146
- Day-dreaming, 236
- Death instinct, 293
- Decision, 116; disturbance in compulsion, 119; disturbance in depression, 118; disturbance in neuroses, 118; disturbance in psychopathy, 118
- Decoration, 146; in delusions, 146; in manics, 146

Déja Vecu, 239
 Déja Vu, 239
 Dejerine, 24
 Delirium, 66; hysterical, 397; occupational, 68
 Delusion, 242; of grandeur, 246; of influence, 243; of persecution, 243; of reference, 243; somatic, 246
 Dementia Precox, 375
 Depersonalization, 203
 Depression, 188, 408; reactive, 405
 Deterioration, 115
 Determinants, 45; ontogenetic, 46, 280; organic, 46, 323; phylogenetic, 46, 257; situational, 46, 313
 Development, ontogenetic, 39; phylogenetic, 39
 Disease entity, 46
 Dissociation, 282
 Distractibility, 62
 Dizziness, 214
 Doubt, 220, 230
 Drawing, 145
 Dream elaboration, 298
 Dreams, 29, 179; psychoanalytic concept, 297
 Drowsiness, 68
 Drugs, experimental use of, 23
 Dubois, 24
 Dullness, 76
 Dysarthria, 128
 Dysmetria, 81
 Dysparunia, 158
 Dysphagia, 154
 Dysplastic, 273
 Dystonic, 275

E

Economic factors, 317
 Education, 31
 Ego, 288
 Ego ideal, 294, 296
 Ego instinct, 294
 Eidetic vision, 211
 Elaboration, 342; primary process, 342; secondary process, 342
 Electrical reactions, disturbances of, 252

Electrophysiology, 251
 Emotional expression, 147; qualitative disturbances, 148; quantitative disturbances, 147
 Emotional inadequacy, 148
 Emotional lability, 148
 Encephalitis, 331
 Endocrines, 333
 Enuresis, 155
 Epilepsy, 123; Jacksonian, 123
 Esquirol, 20, 22
 Euphoria, 187
 Evacuation, disturbances in, 154
 Evaluation, 44; subjective, 215; transitional disturbances, 224
 Excitability, 76
 Excitement, 66
 Exhilaration, 405
 Experience, 44, 52, 183; definition of, 13; psychopathological, 44; subdivision of, 185
 Expression, 44, 55, 120; artistic, 145; emotional, 147; instinctual, 150; of nutritive instinct, 150; of sexual instincts, 156
 Extraversion, 62, 402
 Extravert, 268

F

Feeble-mindedness, 371
 Feeling, 198
 Feelings, 205; ambivalent, 209; disturbance in intensity, 207; disturbance in quality, 208
 Ferenczi, S., 24
 Fetishism, 160
 Fine Arts, 31
 Fixation, 293
 Fixation point, 293
 Flight of ideas, 131
 Food refusal, 153
 Free association, 5
 Freud, S., 21, 24
 Frigidity, 158
 Fundamental disturbance, 383; in function of accretion, 400; in function of ratiocination, 388; in function of self-assertion, 415

G

- Gait, 139; broad based, 139; disturbances in, 139; goose step, 139; parietic, 139; shuffling, 139; toy soldier, 140; spastic, 139
 Gall, 23
 Genetics, 29
 Gerontophilia, 160
 Gestalt psychology, 332; school of, 23
 Gesture, 134; disturbance in depression, 136; disturbance in Parkinsonism, 136; in manics, 135; qualitative disturbances, 137; quantitative disturbances, 134
 Giovanni, 272
 Goldstein, K., 23, 334
 Grand Mal, 181
 Growth, 357
 Grubelsucht, 230
 Grünbaum, A., 82
 Guilt, feeling of, 410

H

- Hallucination, 212; auditory, 213; haptic, 213; hypnagogic, 213; olfactory, 213; somatic, 213; visual, 213
 Hart, B., 11
 Hashish, 329
 Head, H., 23, 129
 Healy, W., 114
 Hearing, disturbances of, 80
 Hebephrenia, 425
 Hemiplegia, 124
 Heredity, 264
 Heterosexuality, 360
 Heterosexual stage, 160
 Hippocrates, 19, 21
 History, 38; family, 39; of the disease, 39; personal, 39
 Homosexuality, 160
 Homosexual stage, 159
 Hughlings-Jackson, 23
 Hutter, 272
 Hypaesthesia, 80
 Hypalgesia, 80
 Hyperaesthesia, 80
 Hyperalgesia, 80
 Hyperosmia, 80

- Hyperpalaesthesia, 80
 Hypnosis, 21, 181
 Hypopalaesthesia, 80
 Hyposmia, 80
 Hysteria, 376
 Hysterical, anaesthesia, 235; blindness, 235; paralysis, 235

I

- Id, 290, 341
 Idées fixes, 282
 Identification, 241
 Idiocy, 371
 Idiosyncrasy, 156
 Idiot, 116
 Illusion, 210; completion, 210; emotional, 211; activity, 211
 Imbecile, 116
 Imbecility, 371
 Impotence, 158
 Impulse, 345
 Inadequacy, feeling of, 40
 Incontinence, 155
 Individual psychology, 303
 Infections, effects of, 330
 Inflammation, 26
 Ingestion, disturbances in, 152
 Inhibition, 308; external, 308; internal, 308; of delay, 308; of differentiation, 308; of extinction, 309
 Insomnia, 176
 Instinctive drives, 284
 Intellect, 84
 Intellection, 54, 84
 Intelligence, 84, 114; borderline, 115; subnormal, 115
 Intelligence quotient, 115
 Intelligence tests, 114
 Introspection, 231
 Introversion, 64, 418
 Introvert, 268
 Irritability, 76; protoplasmic, 75

J

- James, W., 200
 James-Lange theory, 247
 Janet, P. M., 23, 282, 338
 Jaspers, K., 43, 145, 258

Jones, E., 24
 Judgment, 105; absolute, 109; in feeble-mindedness, 107; in manics, 106; in organic disease, 107; in schizophrenia, 108; qualitative disturbances, 106; quantitative disturbances, 105; relative, 109
 Jung, C. G., 21, 24, 267

K

Kahlbaum, 22
 Kahn, E., 345, 350
 Klages, L., 143, 345, 350
 Klaustrophobia (also Claustrophobia), 219
 Kleptomania, 164
 Kohlstedt, 272
 Kraepelin, E., 21, 22, 23
 Kretschmer, E., 171, 273
 Kronfeld, 24
 Küppers, 383

L

Larson, J., 250
 Lashley, K. S., 23
 Leibnitz, 338
 Leptosoma, 273
 Lethargy, 77
 Levy-Brühl, 225
 Libido, 268
 Lie detecting, 250
 Liepmann, 23
 Liping, 128
 Logic, 105

M

Macrographia, 143
 Macropsia, 82
 Manic excitement, 94
 Mannerism, 137
 Marche a petits pas, 139
 Masochism, 161
 Masturbation, 159
 Medicine, 29; goal of, 17
 Memory, 29, 110; disturbance in paranoids, 112; disturbance in sensitive, 112; in manics, 112; past, 112; qualitative disturbances, 113; quan-

titative disturbances, 111; recent, 112; retention, 112; rote, 112
 Mental activity, abnormal, 14; definition of, 13; standards of, 15
 Mental disease, acquired, 373; causes of, 45
 Mental disturbances, congenital, 370
 Mental Hygiene, 30
 Mentally abnormal, 15
 Mentally normal, definition of, 15
 Mescaline, 329
 Mesmer, 21, 23
 Meyer, A., 21, 22, 24
 Micrographia, 143
 Micropsia, 81
 Mis-actions, 298
 Mood, 189; changes in, 405
 Moron, 116
 Moronism, 371
 Morphine, 329
 Motility, 121; disturbances in, 121; general, 121
 Movements, athetoid, 125; choreiform, 123; of special organs, 123
 Multiple personality, 234
 Music, 145
 Mutism, 127, 131

N

Narcissism, 286
 Narcissistic stage, 158
 Narcolepsy, 181
 Negativistic, 72
 Neologism, 100, 133
 Nervous System, autonomic, 353; central, 353; peripheral, 353
 Neurasthenia, 376
 Neuropsychiatry, 20
 Neuroses, 376
 Nightmare, 180
 Nostalgia, 316
 Nyctophobia, 219
 Nymphomania, 157

O

Observation, 35
 Obsession, 221; contamination, 222; hand washing, 222

Obsessive thought, 220
 Occupational delirium, 122
 Oculogyric crisis, 167
 Oedipus complex, 291
 Oniomania, 165
 Oral stage, 159
 Organic causes, local effects of, 332;
 specific effects of, 326; traumatic,
 326
 Organic factor, ontogenetic effects of,
 335
 Organs, excretory, 250; secretory, 250
 Orientation, 88; disturbances of, 90

P

Painting, 145
 Pallor, 250
 Paraesthesia, 80
 Paralgesia, 80
 Paralysis, 124
 Paramnesia, 113
 Paranoia, 244, 376
 Paranoiac, 71
 Paranoid ideas, 243
 Paranoid reactions, 426
 Paranoid state, 376
 Pareidolia, 211
 Paresis, 124
 Parosmia, 80
 Pathological liar, 373
 Pathological lying, 131
 Pathology, 26
 Pavlov, I. P., 23, 306
 Pavor nocturnus, 180
 Pearson, K., 11
 Pedophilia, 160
 Perception, 209; disturbance in in-
 tensity, 209; disturbance in quality,
 210; disturbances of, 209
 Perseveration, 101
 Personal factors, 318
 Personalism, 323
 Personality, structure of, 337, 349
 Personality structure, adjustment as
 standard, 352
 Petit Mal, 181
 Pharmacodynamics, 252
 Phenomenology, 51
 Phobia, 218

Phobophobia, 219
 Phonation, 127
 Physical factors, effects of, 331
 Pick, 23
 Pinel, 20
 Pleasure principle, 287
 Polygraph, 249
 Poromania, also Wanderlust, 166*
 Porteus, 114
 Postencephalitic, character change,
 331; Parkinsonism, 331
 Post hypnotic order, 182
 Posture, 140; catatonic, 141
 Preconscious, the, 343
 Primitive act, 170
 Prinzhorn, H., 145
 Procurement of food, disturbances in,
 151
 Projection, 243
 Propagation, 359
 Propulsion, 140
 Pseudo-amnesia, 113
 Pseudo-hallucination, 213
 Pseudologia fantastica, 236
 Pseudo-reminiscence, 113
 Psychasthenia, 376
 Psychasthenic, 90
 Psychic functions, fundamental, 270
 Psychoanalysis, 21, 24, 282; personal-
 ity structure, 339
 Psychogalvanic reflex, 252
 Psychological healing, 21
 Psychology, 29; abnormal, 12; ap-
 plied, 17; goal of, 17; pure, 17
 Psychoneurosis, 376
 Psychopathological phenomena, causes
 of, 257
 Psychopathologist, 27
 Psychopathology, arrangement of, 41;
 a science, 11; definition of, 10; de-
 velopment—descriptive, 21; develop-
 ment—explanatory, 22; develop-
 ment—practical, 20; goal of, 18;
 history of, 19; limitations of, 16;
 practical evaluation of, 25; rela-
 tionships of, 16; relation to medi-
 cine, 17; relation to psychology, 17;
 sources of material, 33; the field
 of, 3
 Psychopathy, 74, 277, 372, 419; cyclo-

thymic, 373; schizoid, 373; sexual, 373
 Psychosis, 373; due to exogenous toxin, 374; manic depressive, 375, 405; organic, 374; symptomatic, 374; with feeble-mindedness, 371
 Pulse, 249
 Pyknolepsy, 181
 Pyknotic, 273
 Pylorospasm, 154
 Pyromania, 165

R

Rank, O., 24
 Ratiocination, 361
 Rationalization, 216
 Reactions, substitute, 390
 Reaction type, complex, 427, 429; transitional, 427, 435
 Reality, 198; loss of sense of, 202; sense of, 198
 Reality principle, 287
 Reception, 44, 75; psychopathology of, 75; subjective component, 44, 197
 Receptivity, 75
 Reflex acts, 168
 Reflex, conditioned, 307; unconditioned, 307
 Regression, 293
 Relationships, within the situation, 313
 Religion, 32
 Repetition compulsion, 292
 Repression, 285
 Resistiveness, 72
 Resonance, 61
 Respiration, 248
 Retardation, 67, 95; in speech, 131; motor, 122
 Retropulsion, 140
 Romberg test, 141

S

Sadism, 161
 Satyriasis, 157
 Scattering, 116
 Schilder, P., 23, 24
 Schizoid, 275

Schizophrenia, 87, 375; catatonic, 376; hebephrenic, 376; paranoid, 375
 Schizophrenic, 90
 Schnauz-Krampf, 137
 Science, 11
 Secretion, internal, 251
 Selection, 357
 Self-assertion, 355
 Self-depreciation, 195
 Self-extension, 355
 Self-preservation, 355
 Senile, 101
 Sensation, 79; qualitative disturbances, 80; quantitative disturbances, 80
 Sex instinct, 294
 Shock, 327
 Sich-todt-Stellen, 172
 Sigaud, 272
 Situation, 53
 Sleep, 174; content, 178; disturbances of, 174; form, 180; reversal of rhythm, 175; rhythm, 174
 Sleepiness, 68
 Social factors, 315
 Sociology, 31
 Sodium Amytol, 329
 Somnambulism, 180
 Somnolence, 176
 Sopor, 77, 176
 Space, 81; qualitative disturbances, 82; quantitative disturbances, 81
 Spearman, 114
 Speech, 125; automatic, 169; disturbances in rhythm, 128; disturbances of, 125; explosive, 128; inner, 126; monotonous, 128; syllabic, 128
 Speech center, disturbance of, 334
 Spinoza, 118, 281, 338
 Station, 140; in astasia, 141; in Parkinsonians, 141; in schizophrenia, 141
 Stereotypy, 149
 Stern, W., 114, 323, 345
 Stupor, 68
 Stuttering, 128
 Subjective contents, objectification of, 233
 Subjective evaluation, 215
 Subject-object: differentiation, 217,

decrease of, 236, exaggeration of, 230, loss of, 240, preservation of, 217

Substitution, 299

Suggestion, 21, 23

Suicide, 166, 173

Symbol, auditory, 104; gustatory, 104; olfactory, 104; vibration, 104; visual, 104

Symbolic expression, 128

Symbolic relationships, 102, 126

Symbols, 298

Symptom, primary, 382; secondary, 382

Symptom formation, 298; psycho-analytic concept, 299

Symptoms, 26

Synaesthesia, 81, 210

Synthesis, 46, 367; on basis of adjustment, 384

Syntonic, 275

Syphilis, 330

T

Tages-rest, 297

Taste, disturbances of, 80

Temperament, 345

Temperaments, 267

Tension, psychological, 282

Terman, 114

Tetraplegia, 124

Thought, 92; autistic, 237; dereistic, 237; omnipotence of, 245

Thurstone, 272

Time, 81; qualitative disturbances, 82; quantitative disturbances, 82

Torpor, 68, 77, 176

Torsion spasm, 125

Toxic agents, 328

Tremor, 124; intention, 124

Triebe, 284

Twilight state, 68

Types, constitutional, 266; mental, 268; mixed, 274; physical, 274

U

Unconscious, the, 341

Unreality, feeling of, 203

Urethral stage, 159

V

Vahinger, 232

Van Gogh, V., 145

Verbigeration, 132

Vertigo, 214

Vision, disturbances of, 80

Vivacious, 66

Vocabulary, in intelligence test, 116

Volubility, 130

Vomiting, 155

W

Watson, J. B., 312

Waxy flexibility, 122

Weizsaecker, V. V., 23, 82

Wells, F. L., 114

Wernicke, 23

White, Wm. A., 22

Will, 117

Words, 126

Word salad, 132

Writing, 142; automatic, 169